

UNIVA OF WICH



Montbly . . .
Magazine of
Dental Art, Science
and Citerature . . .

Published by Consolidated Dental Manufacturing Co. 130, 132, 134 Washington Place; 187, 189, 191 West 4th Street, New York...

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Subscription, \$1.00 per year Foreign U.P.U. Countries \$1.75 Canada \$1.40 per year

Entered as second class matter at the New York, N.Y., post office under the Act of March 3, 1879 Uol. XXXIU. No. 5 May 1912



R. Ottolengui, m.D.S., D.D.S., EC.D. Editor 80 West 40th St. New York

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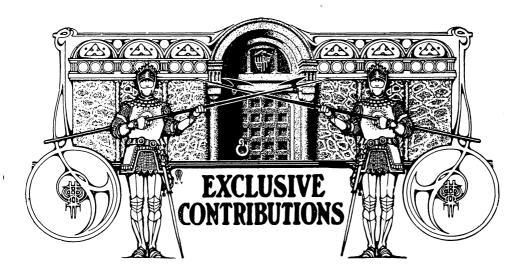
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Dental Radiography.*

By HOWARD R. RAPER, D.D.S.,

Professor of Operative Technic and Roentgenology at Indiana Dental College, Indianapolis.

CHAPTER VII—Continued.

Che Uses of the Radiograph in Dentistry.

31. To Cocate Foreign Bodies, Such as a Broach in the Pulp Canal or Tissue at the Apex of a Tooth; A Piece of Wooden Tooth-Pick in the Peridental Membrane, Etc.

Case: A young lady about twenty-five years of age. Abscess pointing near the apex of an upper central incisor carrying a post porcelain crown. I suspected that the canal of the central was not filled properly, and made a radiograph (Fig. 219) to learn if in this surmise I was correct. The radiograph shows the canal filled. At the apex of the root can be seen a large abscess cavity, with foreign bodies of some nature in it.

An incision was made on the labial aspect, and what was thought to be all of the foreign material, which proved to be cement and gutta-percha—mostly cement—was removed through the external alveolar plate. A radiograph (Fig. 220) was made, and shows some cement (the larger shadow) and some gutta-percha (the small shadow) still in the abscess cavity.

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These bodies were removed and another radiograph (Fig. 221) made to prove that no foreign irritating body remained in the abscess cavity.

The pus sinus was then curetted, washed, cauterized, injected with bismuth paste, and another radiograph (Fig. 222) made. All of this work was

done at one sitting, and consumed about two hours' time. The radiograph (Fig. 222) shows that the bismuth paste does not entirely fill the abscess







Fig. 219

Fig. 220

Fig. 221

Fig. 210. Cement and gutta-percha—mostly cement—in an abscess cavity at the apex of a postporcelain crowned central incisor.

Fig. 220. Same as Fig. 219, after what was thought to be all of the cement and gutta-percha
was removed. The radiograph shows both some cement (the larger shadow) and some guttapercha (the small shadow) still remaining in the abscess cavity.

Fig. 221. The same as Fig. 219, showing the abscess cavity clear of all foreign bodies.

sinus. It has been my experience that the most vigorous and earnest efforts often fail to "completely fill" an abscess cavity with bismuth paste. The manufacturers of the paste tell us that "every crevice" must be filled or the paste will not have the desired curative effect. Every crevice that can be filled should be, I concede. But I am showing you a case now in which the sinus was not quite filled, and, as we shall see presently, the results obtained were ideal. Three days after the operation another injection of bismuth paste was made. At this sitting the paste was not injected under as much force as the previous injection, for I did not wish to break up and destroy any granulation tissue that had formed along the walls of the sinus. Another injection under even less pressure than the second was made at the end of four days. The patient returned one week after the third injection with no symptoms of her former trouble.

Three and one-half months after the operation Fig. 223 was made. It shows a most remarkable and gratifying condition. The abscess cavity is entirely



filled with new bone. This new bone is as yet not quite as dense as the surrounding bone.

Case: Man of middle age had suffered obscure neuralgic pains for about a month. None of the teeth on the affected side were tender to percussion or pressure. A radiograph (Fig. 224) was made to learn whether or not the canals of the upper second molar were filled. There was a very large amalgam filling in this tooth. The radiograph does not show the roots of



Fig. 222



Fig. 223

Fig. 222. Same as Fig. 219. The abscess cavity filled with bismuth subnitrate paste. Fig. 223. Same as Fig. 219, three and one-half months after the operation. The abscess cavity is entirely filled with new bone. The new bone is as yet not quite as dense as the surrounding bone.

the molar well, but it *does* show a dark shadow between the second and third molars just above the cervical margin of the filling in the distal of the second molar. On inquiry it was learned that the patient was in the habit of using wooden toothpicks. Suspecting the shadow to be a piece of toothpick, an attempt was made to remove it with explorers, canal pluggers and silk floss. The effort met with failure, but, feeling sure that my diagnosis was correct, the third molar was extracted. The piece of toothpick adhered to the extracted tooth. There was an immediate and complete recovery from pain.

Case: Young woman, had been in the hands of an incompetent dentist, who had treated an upper first bicuspid for several weeks, and had finally advised its extraction, whereupon the patient left him, presenting to me, and asking if the tooth could not be saved. A radiograph (Fig. 225) was made, and shows a piece of broach in the canal and a perforation to the distal through which passes a gutta-percha point. About the end of the point is an abscess. Owing to the position of the tube, which was placed



too high, the teeth in the picture are too short, and the perforation, which was well above the gum line—too far to be detected—seems to be just at the neck of the tooth.

I agreed with the "incompetent dentist" that the tooth could not be saved. The condition revealed by the radiograph could not have been learned by any other means save extraction and dissection of the tooth.





Fig. 224

Fig. 225

Fig. 224. The arrow points into a piece of wooden toothpick between the second and third molars.

Fig. 225. The upper arrow points to a piece of broach in the canal of the upper first bicuspid. The lower arrow points to a piece of gutta-percha passing through a perforation to the distal.

32. To Determine the Presence or Absence of a Bit of Root Imbedded in the Gum Tissue.

After the extraction of a great number of teeth, or after having been operated upon by some other dentist, a patient will present with the gum tissue highly inflamed and, pointing to the inflamed area, say, "Isn't there a piece of tooth there yet?" Unless the X-rays are used it is necessary to anesthetize the parts and dissect away some of the soft tissues to determine whether the inflammation may be due to an unremoved bit of tooth root, an unresorbed spicula of process, or a bit of process fractured from the jaw. This requires a great deal of time and work, and causes the patient unnecessary pain. The radiograph should be used.

Case: Much swelling of the face on the affected side. The patient was unable to open the mouth to any extent without considerable pain. Two weeks previously the lower second molar on the affected side had been extracted (?) by a quack dentist. The question naturally arose, "Has all of the second molar been removed?" A radiograph (Fig. 226) was made, and shows that the mesial root still remains. It was taken out, and the case recovered promptly. The advantages derived from using the radiograph in this case were as follows: It saved the patient the pain of opening the



mouth for a prolonged instrumental and ocular examination; and also the pain caused by lancing, dissecting, and probing incident to such an examination. It saved both the patient and the operator time. It showed clearly and exactly how much of the tooth was left, and illustrated its exact location. It made the extraction of the piece of root decidedly easier for both patient and operator.

Figure 227 is of a case similar to that shown in Figs. 227 and 228. Fig. 226. In this case, however, the second molar had been extracted a year previously, and the radiograph shows no unremoved bit of tooth root. The radiograph fails to





Fig. 226

Fig. 227

Fig. 226. Unremoved mesial root of a lower second molar.

Fig. 227. The radiograph proves the absence of an unremoved root of the lower first molar.

disclose a cause for the clinical signs. But let me impress you with this fact: it does show that an unremoved bit of tooth root is *not* the cause, and so aids us very greatly in a diagnosis by elimination. The patient did not return after his first visit, so the case was never diagnosed. There may have been a third molar impacted in the ramus. (See Fig. 228.) No one can deny the possibility. We took only the first step toward diagnosis—we eliminated a possible cause.

Though I have been unable to obtain a definite history of this case, it is, in all probability, about as follows: After the extraction of the upper teeth the patient returned with a localized inflammation of the gum tissue in the cuspid region. A radiograph was made to learn if this inflammation was caused by an unresorbed bit of process or a piece of tooth root. The picture shows not only a piece of tooth root, but also an impacted cuspid tooth. It is not unlikely that this patient suffered from obscure neuralgic pains, headache, or other nerve affections.



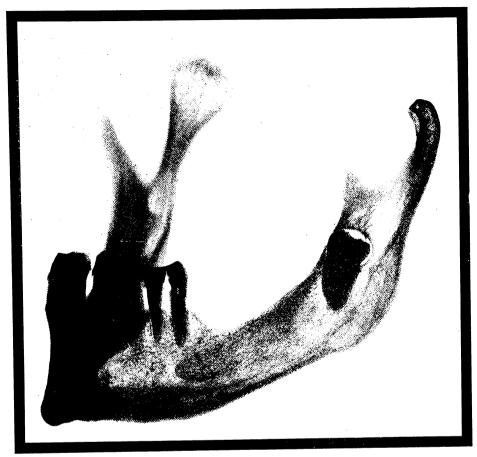


Fig. 228

Fig. 228. This radiograph is of a dry subject. Pictures of dry bones show clearly because there are no soft tissues to penetrate. The third molar is hadly impacted in the ramus. (Radiograph by Cryer, of Philadelphia.)

Notice the bit of root imbedded in the process. My chief reason for exhibiting this picture is because Fig. 230. it shows so clearly the gum tissue overlying the

process.

A piece of root, one end of which rests on the edge of an ill-fitting shell crown, the other against Fig. 231. the cuspid tooth. The inflammation caused by this root extends up to the apex and to the mesial of the cuspid. In such a position the root could never have dropped down to where it could be seen in the mouth.



33. To Diagnose Fracture of a Root.

Within the same week two cases in which the Tigs. 232 and 233. upper anterior teeth had sustained a severe blow presented at the college clinic for treatment. In one case a lateral incisor (Fig. 232), and in the other case both centrals (Fig. 233)

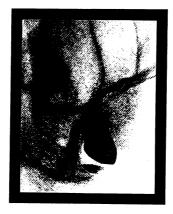


Fig. 229

Fig. 229. A piece of tooth root and an impacted cuspid in an otherwise edentulous upper jaw. (Radiograph by Lewis, of Chicago.)







Fig. 231

Fig. 230. The arrow points to a bit of tooth root. Notice how clearly the gum tissue shows in this radiograph. (Radiograph by Ream, of Chicago.)

Fig. 231. A bit of tooth root, one end resting on the edge of an ill-fitting shell crown, the other against the cuspid. The abscess caused by this piece of root extends to the apex and to the mesial of the cuspid. (Radiograph by Blum, of New York City.)

were very loose. Radiograph Figure 232 shows the root of the lateral fractured. Extraction is indicated. Radiograph Figure 233 shows that the roots of the centrals are not fractured. Extraction is contraindicated. (As can be seen in the radiograph, both central crowns are broken off, and one lateral is knocked out completely.) It will be appreciated that the radiographic findings in these cases governed completely our course of

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treatment. I would suggest it as a most rational expedient that radiographs be taken in all cases of traumatism, before treatment is begun.

Case: Young lady fell on dance hall floor striking the upper centrals and loosening them. Her dentist treated both teeth, removing inflamed pulps. One tooth progressed promptly to recovery, but the other remained loose and sore. After several weeks of treatment the patient presented to Dr. F. B. Moorehead, of Chicago, who had a radiograph made before commencing treatment. The radiograph shows the root of the loose tooth fractured





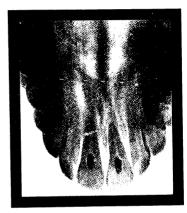


Fig. 232

Fig. 233

Fig. 234

Fig. 232. Fractured upper lateral incisor. Because of the location of the break extraction is indicated.

Fig. 233. It was thought that the roots of the centrals were fractured. The radiograph shows they are not.

Fig. 234. Left central fractured near the news. The case had been treated for alveolar ab-

Fig. 234. Left central fractured near the apex. The case had been treated for alveolar abscess without success for several weeks. The removal of the piece of fractured root-enthrough the external alveolar plate effected a cure. (Radiograph by Lewis, of Chicago.)

near the apex. Dr. Moorehead removed the apex of the root through the external alveolar plate, smoothed the end of the broken root, and the case recovered promptly. It is almost superfluous to do so, yet I want to call your attention to the fact that this case, like very many others I have reported, could not have been diagnosed and treated properly without using the radiograph.

34. To Observe the Size and Shape of Roots of Teeth to be Used in Crown and Bridge Work.

Malformed upper laterals—"peg laterals"—

occur quite frequently. Their appearance is bad, and, for esthetic reasons, we often crown them. The porcelain jacket crown is difficult to construct and, at best, fragile. If the root of the peg lateral is long enough a post porcelain crown of some



kind is indicated in preference to the porcelain jacket. Figure 235 shows a peg-shaped lateral. In this case the root is long enough to permit of the introduction of a post into the canal a sufficient distance to insure stability of a post crown. The root is somewhat tortuous, but, with the radiograph to guide, the operator should be able to enlarge the canal sufficiently, without danger of making a perforation into the pericemental membrane.





Fig. 235

Fig. 236

Fig. 235. A peg lateral, the root of which is somewhat tortuous. (Radiograph by Blum, of New York City.)
Fig. 236. A malformed cuspid tooth. It would be a mistake to use such a tooth as an abutment for a large bridge.

Before using teeth as abutments for large bridges, it would not be unwise to make radiographs to note the size of the roots. It would be a mistake,

I believe, to use such a tooth as the malformed one shown in Fig. 236 as an abutment for a bridge of any extent. It should be borne in mind that unless the pose is exactly right—and we seldom have it so—the teeth, as they appear on the radiograph, do not represent definitely the exact length of the teeth themselves. Nevertheless, the radiograph does give us a fairly definite idea of the relative length of the teeth.

35. As an Hid and Safeguard When Enlarging Canals for Posts.

There are times while enlarging canals for posts when we lose the course of the canal and are much disturbed to know if we are making our enlargement in the proper direction. Place a wire in the canal and make a radiograph. If the enlargement is being made to the mesial or distal, with danger of a perforation, this can be seen in the picture. One might completely penetrate the side of the root towards the labial, or buccal, or lingual, without being warned of the danger by a radiograph, but, bear in



mind, perforations made through the side of a root are, with rare exceptions, either to the mesial or distal.

In Fig. 237, observe the central carrying the post porcelain crown. The post does not follow the canal. Had the enlargement for it continued in the same direction as was started, the dentist would have penetrated the side of the root. A radiograph of this case would have enabled the operator to see his mistake and correct it.





Fig. 237

Fig. 238

Fig. 237. The post in the post-porcelain crowned central does not follow the canal. penetrates the side of the root. (Radiograph by Graham, of Detroit.)

Fig. 238. Perforation through the side of the root of an upper second bicuspid. Perforation through the perforation. (Radiograph by Graham, of Detroit.)

This radiograph shows a perforation through the side of the root, to the distal, in an upper second bicuspid. The perforation was made when enlarging the canal for a post. A probe passes through the side of the root, up into an abscess cavity at the apex of the tooth.

The radiograph is an aid not only when we are enlarging canals for posts, but also when we are removing posts from canals. It shows us how long the post is, and how much tissue we can cut away from the sides of it in safety.

36. To Examine Bridges About Which There Is An Inflammation.

At best fixed bridges are not sanitary. For this Figs. 239 and 240. reason we often find an intense inflammation about them. Thorough depletion by scarifying and the use of an astringent, antiseptic mouthwash will usually give prompt relief. There may be causes for the inflammation other than the simple fact that the bridge is a foreign body in the mouth, making thorough cleanliness impossible. Observe Figs. 129, 239 and 240 as examples. It would be



extremely difficult to remove the bit of root shown beneath the bridge in Fig. 230 without removing the bridge. The piece of root shown in Fig. 240 can easily be removed through the external alveolar plate without removing the bridge.

I have recently heard of a case in which a very severe inflammation existed about a bridge which had only been set for about a week. The



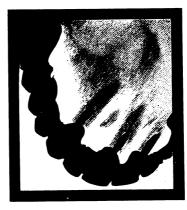


Fig. 239

Fig. 240

Fig. 239. A piece of tooth root in the tissues beneath a bridge. (Radiograph by Lewis, of Chicago.)

Fig. 240. A piece of tooth root in the tissues above a very large bridge. It would be easily possible to remove it through the external alveolar plate without removing the bridge. (Radiograph by Lewis, of Chicago.)

case was treated for several days, and finally the bridge removed when it was seen that, at the time the bridge was set, a considerable quantity of cement had been forced into the tissues near a shell crown abutment. Removal of this cement effected a prompt cure. Had a radiograph been made, the cause of the trouble would have been seen immediately, and, depending on the exact location of the cement, removal of the bridge may have been avoided.

37. To Observe the Field Before Constructing a Bridge.

This use of the radiograph has already been illustrated—Figs. 129, 239, and 240. The radiograph will not only disclose the presence of unerupted teeth, and unremoved pieces of tooth roots, but, as has been suggested under another heading, it will also show the operator the size, shape and health of the roots of the teeth he is using for abutments.



A Proposed National Dental Council.

By T. E. Turner, D.D.S., St. Louis, Mo. President, National Association Dental Examiners.

The editorial in the ITEMS OF INTEREST for October deals with the tabulation or testing of the product of the dental schools by the National Association of Dental Examiners, uniformity of examinations and laws, and some laches of the N. A. D. E., apparently without a full knowledge of what has been done and attempted. This apparent lack of information is excusable, since the proceedings of the N. A. D. E. receive slight publicity. It is true, as the editorial states, that no tangible results have been attained along the lines of uniformity of examinations and exchange of license of national scope; however, the N. A. D. E. has been laboring for some years through committees along these lines, and it is hoped that something definite may yet result.

The writer, as chairman of the Committee on Uniformity of Examinations of the N. A. D. E., in a report submitted at the meeting held at Minneapolis in 1907, recommended the organization of a National Dental Council, with power to issue Certificates of Qualification, said certificates to be accepted by the various State Boards as qualification sufficient to grant license to practice without further examination.

The scheme for a National Dental Council for the United States was patterned after the Dominion Dental Council of Canada, which was, and still is, in successful operation, and had been established under circumstances similar to those existing in this country. Each province there, as is each state here, being supreme in its control over its internal affairs, each province had to voluntarily enter into the agreement and amend its laws in order to receive any of the benefits.

It will be necessary to give a brief account of the organization and workings of the Dominion Dental Council in order to have a clear understanding of the plan suggested for the United States.

Dominion Dental Council. The Dominion Dental Council consists of one representative from each province, elected or appointed by the incorporated dental registering body in each province that agrees to accept the standards of professional examinations and certificates of qualifi-

cation for dentists, issued by the D. D. C., without further examination. These representatives serve for terms of four years, or until their successors are elected.

The D. D. C., as thus constituted, is a central delegated body; its duties are administrative only; it exerts no authority over the dental pro-



fession of the provinces, nor does it interfere with the laws or regulations within their jurisdictions. Its chief function is to issue certificates of qualification to those that meet the requirements, which certificate will entitle the holder to registration without examination in all the provinces entering into the agreement.

A Board of Dental Examiners, consisting of ten men, is appointed by the D. D. C. The members of this Board are selected with great care, and for their known qualifications to examine in their respective subjects. This Board prepares all the questions for the examinations held under the authority of the Council. The examinations are conducted by Presiding Examiners, who are appointed by the Council, and are held at stated times simultaneously in each province, according to a definite schedule, each subject being given at the same hour at each provincial examination, the same questions being used at each examination. The questions, as prepared by the examiners, are sent to the Secretary of the Council, and are forwarded by him to each examination place under seal, which is broken in the presence of the class at the beginning of each examination. As each candidate finishes, he seals his answers in an envelope provided for the purpose, and it is forwarded by registered mail to the secretary. who in turn forwards it to the proper examiner for correction. Besides the written examination, there is a clinical examination embracing operations in operative and prosthetic dentistry, the details of which are unimportant here.

The Council divided those eligible for certificates of qualification into four classes, as follows:

- Class A. Those who shall enter upon the study of dentistry after January 1, 1906: they shall have passed the matriculation examination, and have a diploma from a recognized Canadian dental school.
- Class B. Those who on the first day of January, 1906, were bona fide students, and who complete the course as prescribed.
- Class C. Those who, on the first day of January, 1905, were holders of unforfeited certificates of license in any province, and had been in regular, legal, ethical practice for ten years immediately prior to application.
- Class D. Those who, on January 1, 1905, had not been in practice for ten years, but who held valid unforfeited certificates in any province.

The requirements differ for each class, the details of which are omitted.

Provision is made for every contingency; the examinations are of a high order, rigid, exhaustive and without favor, so that the certificate of

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qualification is considered a guarantee of the holder's fitness to practice, and is accepted as such by the provincial boards upon payment of the fee.

Dental Council for United States.

The committee report at Minneapolis, referred to above, recommended the organization of a National Dental Council of the United States, consisting of nine members, three each from the National Dental Association, National Association of Dental Fac-

ulties and National Association of Dental Examiners, with authority to formulate a working plan adaptable to this country. After much discussion a committee of nine was provided for, the N. A. D. E. appointed three and the N. D. A. and N. A. D. F. were requested to appoint three each, which, in due time, was done. This committee, I am informed, never held a meeting, so the matter has rested.

It was the opinion of the committee that this method of organizing the Council was practicable in that these national organizations represent the organized dental profession, and every reputable dentist is eligible to membership in at least one of them. and could therefore have a voice in the conduct of affairs.

It is now suggested that a N. D. C. could be organized by having each State Board of Dental Examiners appoint one member of such Council. If as many as ten States would co-operate, an organization could be effected, and other States could be admitted to membership as they complied with the conditions.

It could not be expected that every State would at once enter into this scheme, but as the profession became familiar with it, and the good results became apparent, they would all eventually desire to become affiliated with the organization in order to participate in its benefits. This matter is wholly in the hands of the dental profession, and a mutual agreement to proceed is all that is necessary.

Change in Dental Laws Deeded.

Only a slight change in the dental law of any State is necessary in order to make the Certificates of Qualification legal, and in substance is as follows:

"Provided, however, that the holder of a Certificate of Qualification from the National Dental Coun-

cil, authenticated and proven as the State Board of Dental Examiners of the State of shall require in their rules, shall be entitled to be registered and licensed by said State Board of Dental Examiners for the State of to engage in the practice of dentistry in said State upon payment of the regular fee without further examination."

It would be a mere matter of routine to have this amendment incorporated in any dental law when indorsed by the profession of the State.



Advantages of a National Dental Council.

A National Dental Council, with the authority here outlined, would solve the question of reciprocity, would standardize the examinations, would level the requirements to practice up to the highest standard; it would be a most important factor in standardizing

the dental colleges of this country, as every college would have to comply with its standards in order that their graduates should be eligible to take the examinations; the question of a uniform unit of measurements and more accurate results in tabulation should be solved.

I am convinced that if the dental profession of this country were fully informed on this question they would demand, through their various State Boards or State Associations, that it be put into effect. In order that this may be accomplished it will be necessary for the dental journals to give it the proper indorsement and publicity.

This or some similar plan, organized by mutual agreement among representatives of the several States, is the only method available, without an amendment to the constitution of the United States, which, at the present time, seems an impossibility, and even if it were possible to amend the Constitution and organize under Federal authority, it is a question whether the dental profession by mutual agreement could not handle the matter more satisfactorily, as it would then be kept out of national politics, and would be subject only to the politics incident to any lay organization. Being constituted similar to the N. A. D. E., where politics plays no part, this would probably be a negligible quantity. If organized in the manner last suggested, it would seem that such an organization could have no other motive but to act for the best interest of all concerned.

The N. A. D. E., through its Committee on Laws, has compiled what it considers an ideal dental law, embodying all the good points in the laws of the several States. Every State contemplating a new law is urged to pass the one prepared by the N. A. D. E. in order to have uniformity. It is conceded that a uniform dental law is greatly to be desired, and yet, this would not bring a uniform standard of examination nor a uniform unit of measurement. The law would in each State be subject to construction by the Supreme Court, according to the State constitution; for example, the Supreme Court of Wisconsin decided that the State Board had no authority in relation to preliminary requirements: other States have taken the opposite view. A number of States have held that it is constitutional to require a diploma, in order to be eligible to take the Board examination, while other States have taken the other side of the question; and again, laws give Boards authority to make rules, which rules would be as various as the Boards making them, and some rules are more important than provisions in the law, so that it would seem that a uniform law would not necessarily bring uniform results.



The Committee on Uniformity of Examinations, assisted by some of the most competent men in the profession, has for several years had in course of preparation a set of questions on each subject, which is hoped will produce something of a standard. These questions will soon be available for use by State Boards. At the Boston meeting, in 1908, a list of sixteen subjects, with certain clinical requirements in operative and prosthetic dentistry, was adopted, as being the N. A. D. E. idea of what a State Board examination should embrace. If the State Boards would use the questions as prepared, or ones suggested by them of similar standard, using the subjects and clinical requirements indorsed by the N. A. D. E., some progress would be made toward uniformity, but the correct solution of the whole matter is a central organization of national scope, such as the suggested National Dental Council.

In Canada the Dominion Dental Council has been such a success that the medical profession has in preparation a plan similar to the Dental Council. If there is sufficient demand from the profession a plan can be organized for this country.

Che Dentist Before the Law.

In the Matter of Privileged Communications Between Dentist and Patient.

By Henry Schwamm, D.D.S. (Member of the New York Bar.)

The case of Taggart v. Boynton, which involves a mere property right, seems to have aroused the interest of the profession all over the country, and some dentists were touched by the tears of the infringing manufacturers to the depth of their pockets, and thus, unconsciously perhaps, helped those manufacturers in their unsuccessful attempt to deprive a bonafide inventor of his just reward.

While the argument in that case was going on, a decision was rendered in our State of far greater importance to the dental profession, as it tends to restrict the academic position of the dentist and narrow his standing before the law. The writer refers to the case of Howe v. Regensburg (132 N. Y. Supp. 837), in which it was held that a dentist does not practice "surgery" within the meaning of Section 834 of the Code of Civil Procedure, prohibiting such practitioner from testifying concerning information acquired in attending a patient, etc.

As this question was never before presented in this State for decision, the court considered People v. DeFrance (104 Mich. 563) as leading. In that case the court said: "A dentist is one whose profession is



to clean and extract teeth, repair them when diseased, and replace them when necessary by artificial ones."

While the court in the principal case admits that the above definition of a dentist is too restricted, in view of the progress as a science which dentistry has recently made, yet the court is of the opinion that the decision in the case quoted was correct.

It is a pity that the court of this State did not consider the broader and more rational definition given in State v. Vandersluis (42 Minn. 129). In that case the court said: "The practice of dentistry is the treatment of diseases or lesions of the human mouth, teeth or jaws, or correction of malposition thereof." It is a pity that the court, in the principal case, did not consider the scope of a dentist's services as implied in the latter definition, and it is a pity that the same court did not analyze the requirements of a dental licentiate of to-day. The dentist might have appeared to the court in a different light if the court would have considered these facts and authorities.

As the law is now laid down in this State, the dentist is not only considered inferior to a physician, but he is looked upon as one outside the pale of medicine. If a dentist were to be questioned on the stand as to the removal of a portion of necrosed maxilla, or on the cause that necessitated the insertion of an obturator, he would have to answer in spite of propriety and in spite of his patient's objection. On the other hand, it was held in a most recent case (Hays v. Hays, 97 N.E. 198) that a patient's communication of her financial condition, made to her physician, who was urging her to take a vacation, was privileged.

Considering the laws in point, it is difficult to see upon what principle the court bases its decision. The law of this State requires as a condition, precedent to the admission to the practice of dentistry, the knowledge of the major subjects in medicine. The Legislature, by enacting that law, no doubt intended the dentist to be a specialist in medicine. That being so, why then should one specialist in medicine be compelled to reveal that which another is allowed to withhold? Such discrimination works an injustice to both dentist and patient, and an injustice in a result has been well said to be symptomatic of legal error.

Comments in Eaw Journals. We are told, by people who judge dentists and dentistry by mere hearsay, that "the application of the privilege to dentists would work as an arbitrary expedient for shutting out truth and impeding the administration of justice." (New York Law Jour-

nal.) Another law publication (Law Notes), forgetting that a criminal can refuse to let anyone look into his mouth, if he so wishes, has this to say: "It has frequently been the case that identification has been made

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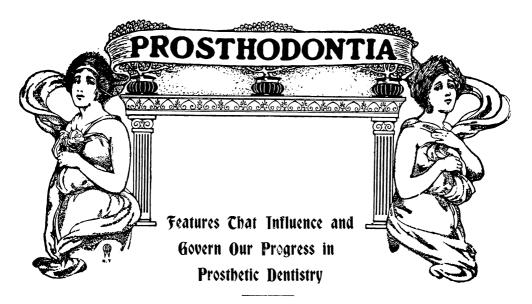


by the testimony of a dentist who has done certain dental work for a patient, and such testimony is apparently within the 'communications' which would be privileged. It is not apparent upon what ground of public policy such communications should be excluded. It may well be that a criminal would prefer not to have a dentist who had treated him professionally testify against him, or that the dentist would prefer not to be compelled to be a witness against a former patient, but such considerations do not outweigh the benefits accruing to the public from the admission of such testimony."

It is to be noted that every argument against the dentist rests on policy and not on principle. In other words, they say, in order that a dentist may sometimes assist the police is sufficient ground to have the dental profession placed in an anomalous position. Can there be anything more absurd? If the law in question is so detrimental to public policy, why not repeal it? Or exclude the nurses from it if anybody is to be excluded at all? In many States of the Union the statute extending privilege to communication between doctors and patients does not exist at all and nobody seems to miss it. The privilege, per se, is not so attractive, and the frequency with which it would be used by dentists would certainly not tend to impede the administration of justice. But the sneer which is implied by the exclusion of the dentist from the benefit of the same deserves resistance.

An attempt is now being made by a bill in the Legislature to amend Section 834 of the Code of Civil Procedure by adding the word "dentistry" after "surgery," so as expressly to entitle communications between patients and dentists to the same privilege as those between patients and specialists in other branches of medicine. As it is to be noted from the foregoing, there is a strong opposition to that amendment, and if the dentists of this State are not on their guard, they will lose their case by default.





By Norman S. Essig, Philadelphia, Pa.
Read before the Second District Dental Society, December, 1911.

Those of us who have followed the growth and development of dentistry in its different phases throughout the last twenty years, have been able to note, with a strange mingling of pleasure and regret, the segregation of the component parts or departments of that art, and the adherence of our practitioners to certain features, not to say specialties, according to the taste, tendency or natural fitness of the individual.

Those who practice in the remote or outlying districts, and who have not access to the dental supplies, except by making a long journey for that purpose, have been forced to remain in what we know as "general practice"; while those of us who are more fortunate have had the opportunity to perfect ourselves individually along our chosen lines.

Dentistry of to-day, when subdivided and viewed from its different angles, represents infinitely more in its several departments, and a vastly wider range, than in the past, and, moreover, it requires a man of more parts and greater attainments than ever before in its history. It has begun to resolve itself into specialties, and this would seem to be the natural result, just as specialization has developed certain phases of medicine, and has resulted in a stage of perfection which has been of such great value and benefit to mankind along these special lines.

The practice of dentistry presents itself to us in a very different light

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from the practice of medicine for many reasons, but probably the aspect which engages our attention most at this point is the arrangement and systematizing of our time. If we are general practitioners, we must practice general dentistry and devote the time necessary to the perfection of the different services required of us; this means, to a large degree, accepting the methods evolved by others, and applying them to our own needs. But no matter how we arrange our practice it always reverts to the question of compensation, either by the hour or for the services rendered, according to the rule the practitioner has prescribed for himself. He is limited by the number of hours he works per day, and the number of days he works in the year, and he must also allow for the natural decrease after he reaches a certain age, so that following along these lines, any one beginning practice can figure out in a few moments the maximum amount which he can earn per year.

Specialization makes it possible for one to give his undivided attention to any one department which he may select, and it would seem that in the light of past events we, as dentists, are no exception to the rules governing other arts.

Prosthetic Dentistry Defined.

It occurred to me when contemplating the profession of dentistry, that while these phases are evolving, prosthetic dentistry has assumed a unique position. Prosthetic dentistry in the minds of many embraces everything not included in operative den-

tistry; therefore, it takes in crown and bridge work, dental metallurgy, orthodontia, plate work, ceramics, rubber work and palatal mechanism; while operative dentistry claims pathology, the porcelain and gold inlay in its different forms, and to a certain extent crown work, together with the insertion of fillings or operating in general.

Therefore, while I make no attempt to classify, I have personally, without premeditation, interpreted prosthetic dentistry to mean the making of artificial dentures and the application and modification of porcelain teeth to given cases, and have come to regard orthodontia, palatal mechanism and crown and bridge work as specialties of prosthetic dentistry.

In 1895 Warren, in his revision of Richardson's Mechanical Dentistry, has noticed a tendency to characterize prosthetic dentistry as "essentially mechanical," and he also noticed a disposition to regard mechanical dentistry as inferior to operative dentistry, and in his preface says in part:

"It is a suggestive fact, commended to the consideration of those who characterize prosthetic dentistry as essentially mechanical, and who seek to disparage the professional and scientific qualifications necessary to success in this department, that the results achieved by the conservative methods alluded to, have been reached only through a critical study



of tooth structure and function, a familiar acquaintance with pathological conditions associated with diseased teeth, and implicated tissue, a comprehensive knowledge of the curative resources of dental therapeutics, a broad and intelligent apprehension of principles underlying mechanical devices, and a marvelous development of ingenuity and manipulative skill."

The disposition to belittle the importance of mechanical dentistry has been clearly demonstrated by the way those who engage in that department of dentistry often treat the subject, which, in the large majority of instances, is regarded in its relations to dentistry as the artist is pleased to regard a certain type of paintings known as "pot-boilers," and it will be engaged in only until an office practice can be established, when all mechanical work will be relegated to the so-called "laboratory man," who does not come in contact with the patient at all.

There may be those present who will say: "I have never regarded prosthetic work from this standpoint, and I make a great many cases each year, and am satisfied with my results." The reply which I would make to such a statement would be that it is not the man who has a high regard for this department of dentistry to whom I am alluding, but the man who does feel that he is a more important and dignified figure in a white jacket standing beside his chair. Those of us, however, who are confining our efforts to the chair alone, cannot give any branch of dentistry our special attention which belongs, strictly speaking, to dental prosthetics.

So it will be observed that the situation relative to this branch is rather unique, and when other details are added to the general tendency to pass over, or through, mechanical work as quickly and lightly as possible, this most important feature of our profession does not secure the consideration and attention which it deserves and justly demands. Notwithstanding these facts, the one who is best equipped to do prosthetic work from an ideal standpoint, the artistic reproduction of the mouth, and the natural organs of mastication, is the man who can watch the progress of deterioration, for it is deterioration which causes us to need artificial dentures, etc. Hence, after all the skill of the operators and pathologists have been expended, we must ultimately and inevitably turn to the use of artificial dentures, bridges and the like, and at this point the necessity for such a service is even greater than was the conservation of the natural teeth at an earlier date, generally speaking.

Reproduction of Natural Arrangement.

If we specialize, and do nothing but prosthetic work, we must give up our regular semi-annual examinations, and only see our patient after all traces of the normal condition has disappeared, and have

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nothing to guide us in our restoration and reproduction except that vague description which even the most intelligent is able to give us.

Therefore, to control our practice, we must watch and govern the way in which our patients lose their teeth; we must anticipate these losses, and unless there are a greater number of teeth to be extracted than is usually the case at one time, the denture should be finished before they are extracted. This method gives us an opportunity to copy the natural arrangement and articulation of the teeth collectively, and any peculiarity or characteristic feature when viewed individually. I, of course, allude to the extraction of teeth affected by pyorrheal or other disturbances, and those which have failed to respond to the treatment of the pathologist, or which from neglect have reached this point before they come to us for our services.

Therefore, unless the co-operation of the dental profession can be secured, it would be a very difficult matter for any one to specialize in dental prosthetics, if he is to produce artistic results and absolute reproductions.

These are some of the most important impediments to the development of prosthetic dentistry along artistic lines, for if this branch of dentistry shows no improvement in its methods and results over the past, it is decidedly on the decline, and to my mind is a remarkable example of the fact that "to stand still is to go back." This is probably not so to the same extent in crown and bridgework, which shows vast improvement in method and technique, and as much specialization as any other department of dentistry.

College Ceaching of Prosthetics.

Viewing the subject from still another angle, we find ourselves limited by the fact that by force of circumstances our fundamental pregraduate training is but meagre, and the time allotted to us for that

branch is only sufficient to enable one to acquire the merest rudiments, whereas much time is needed to attain proficiency in that direction.

Moreover, it is not regarded by the majority from a sufficiently artistic standpoint, nor are the features which create high artistic standards touched upon or taught at all; in very fact, all that a graduate is able to attain during his college education is manipulating to a degree satisfactorily the appliances used in the mechanical laboratory, and invariably he counts upon remaking, on account of failure in some direction, a certain percentage of the work he attempts when first in practice.

In other words, he learns that it requires a certain care to pack a flask for a rubber denture, and he must learn just how to do this; also that a certain temperature for a given period of time must be maintained to secure a satisfactory density when vulcanizing. He learns by his fail-



ures that certain metals must have just so much heat while soldering; that porcelain will crack if not backed, heated and cooled carefully, and so on throughout the technical part of the work; but the application of this to actual definite cases he gets mainly in practice.

Creating in the mind of the student a high ideal, and impressing him with the fact that he is not a mere laboratory man, but an artist of the highest type, should, in my mind, take place at this point. Here he should be impressed with the fact that his individual finger skill and artistic attainments are required to change what would be ordinary mechanical dentistry to an artistic production, which will command attention and an almost unlimited compensation, and while raising the standard of examinations for entrance into a dental school, the artistic tendencies and attainments of each student should be carefully noted and taken into consideration as a part of the requirements for matriculation.

To bring about this state of affairs we must go further in our fundamental instructions than the mere teaching of technique, which conventionalizes our work and robs it of the artistic qualities which are so noticeable by their absence. We must view the subject from the ideal standpoint, and teach it accordingly; study natural teeth as to curves and half-curves; tones and half-tones; inequalities of surface and shade; peculiar characteristics of the mouth in question; arrangement and articulation; the compensation for shrinkage of the integument, and its consequent effect upon the lines of the face; these are the features of our education which, if neglected, pull our standard downwards.

Mould Making. No dental institution in our land teaches mould making, and the subject has apparently not elicited the interest of the dentist, but to my mind there is no better way to study tooth form than by cutting a

mould made from a natural tooth, and certainly no better way to obtain artistic results than the judicious application of the body and enamel in the mould itself.

This department should not be underestimated, for it embraces most of the necessary training which separates technical mechanical dentistry from the artistic reproduction of the natural teeth, and I firmly believe that after being instructed along these lines one's viewpoint of the entire subject changes.

We have been somewhat mystified in the past by the fact that we have been lead to believe that mould making is very complex and difficult, and I fancy rather few of us have ever seen the process from beginning to end. It is, however, not a difficult nor lengthy task to cut a mould, and one possessing manipulative skill sufficient for other features of

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laboratory duties could readily perform this work with but little instruction and demonstration.

Viewing the features which influence and govern our progress from still another point, and considering the changes in our methods, we might ask the question, "Who is responsible for the evolution which has taken place in the forms and application of our porcelain teeth? Who is responsible for discarding to a very large extent the use of metal as a base for artificial dentures?" These features are included, and indeed a great deal of space is allotted to them in every work on prosthetic dentistry, and no up-to-date treatise upon the subject would be complete without them; and yet it seems that the student and the graduate is rather prone to regard them in the light of early dental history; especially the Again, who is responsible for the wretched clasps we so frequently see, which are, for the most part, wrong in form and application. Why do we disregard the foundation of mechanical dentistry as taught by those men who grew along with that branch, and systematized what would otherwise certainly have been hopeless in view of the wonderful progress in its development? It is unquestionably either a lack of interest or a lack of early training; no one would neglect so important a feature unless through lack of interest or training.

One of the answers that suggests itself to me along these lines is certainly unique, in that it differs vastly from the real solution of almost any other question which could confront us in dentistry.

A large majority of those who are engaged in laboratory work do not care to devote much time in the preparation or completion of any work which takes them out of their office, and are naturally looking for a short-cut back to the office again; they want to spend but the minimum of time in grinding teeth or in setting them up. Moreover, in the preparation of the mouth for crowns and bridges they cut freely, sacrificing many times good tooth structure because it shortens the time required, and they often do as the blacksmith does with his hot shoe, burning it to the hoof, thus making the foot fit the shoe. As a result, in the past fifteen years we have had to realize the fact that straight pin teeth have almost gone out of use, and while it is possible that in the future teeth will have no pins at all, that time has not arrived up to date.

The all porcelain crown as it is to-day is not applicable to all cases unless we prepare the root in the manner I have already described by cutting everything away even with the gum line, which forces us, if we use a cap or a band, to run it too far beneath the margin of the gum, which not only causes undue irritation but makes a characteristic blue line at that point which imparts an unnatural appearance, and it is at this juncture that the casting machine is taking its real place in dentistry: and



I firmly believe its use is of more advantage to us in the laboratory than in the office.

But in summing it up, we find that in spite of indifference, neglect, and misapplication, we are in a better position to do beautifully artistic work than ever before in the history of dentistry, if we will but take advantage of the opportunities at hand.

Plaster-of-Paris Impressions.

Passing on to the use of plaster-of-Paris in the taking of impressions, I have been told by clerks in some of our dental depots that it was surprising how many men use but one kind of plaster for all pur-

poses. Therefore, at the present time our impression plaster becomes too hard, and the plaster from which we make our models does not get hard enough, due probably to the effort to accommodate the men who use but one kind.

Too much credit cannot be given to such men as Dr. Angle and others, who are not only adhering to the true and fundamental teachings in the use of plaster-of-Paris for all impressions, but are instructing others how to use the material skillfully, and as a result the orthodontists to-day (as a class of specialists in dentistry) are the only men who are starting their operations uniformly upon a strictly accurate basis, with a good intelligently made model, having lines marked upon it forming the plan of their work.

In dwelling upon the subject of impression taking, there is always danger of getting one's self into a controversy and opening up anew a large field for discussion, but I believe there is no one thing that tends to, and has been more responsible for, inaccuracy in prosthetic dentistry than the indiscriminate use of modelling compounds. These materials have their uses, and in certain connections are inestimable in value as adjuncts, but the only material which starts us properly is plaster-of-Paris.

It matters little how artistic, how beautifully wrought our work may be, if our model is inaccurate our product is a mere specimen of technical skill, and of no value otherwise; not even artistic, unless it represents successfully and truthfully reproduction, and the necessities of the case in hand.

A well made vulcanite denture is probably better in its adaptation, and gives a greater range for artistic effect than almost any other form of entire denture, but the use of metal for partial dentures has unquestionably the precedence over all other materials, and it is in these cases, especially in connection with removable bridges, that we need an absolutely accurate plaster model upon which to make the piece.

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Clasps.

The application of the clasp to partial dentures demands not only accuracy in the model, but great skill in their construction and adaptation, and should

be started with an accurate plan, both in the pattern from which they themselves are cut, and also in attaching them to the plate; otherwise the clasp is a menace to the tooth which it surrounds, and ignorance or neglect of these precautions will undoubtedly result in the loss of the teeth supporting the denture.

All clasps should be made concave before any bending is done at all, and should be constructed of platinous gold of 24 gauge, the only solder being used to attach it to the plate at a point determined by the location of the tooth to be clasped. The plate should be cut out at this point, allowing the part of the clasp to be soldered to extend through to the plaster model, so that the minimum amount of solder can be used to attach it firmly. Yet how often do we see a clasp made of coin or 18carat gold, attached to its point of support by a huge lump of solder, which is so unyielding that it holds everything rigid, and stress on either side will rock or tilt the piece itself. These creations are either too thick and too narrow, or too wide and of too thin a gauge, with no attempt to concave the surface or clasp the tooth properly. These are the neglected details which have come to my notice in actual practice, and I am not referring to work done by undergraduates, but cases which have been made by dentists of repute, or else the work for which they assume the responsibility, made by some one who does their mechanical work for them.

All partial dentures, especially for the lower jaw, should be made of several thicknesses to give rigidity without interfering with adaptation, and yet I believe that outside of my own laboratory I have not seen a dozen cases of this kind in the last 15 years.

The features of mechanical dentistry that impress me as being most neglected are those things which are at the root of it all, those fundamental features leading to accuracy and artistic development, that preeminently necessary part of our work the plan—a plan which will carry us through the entire operation, the adherence to which gives us almost without effort beautiful and accurate results.

Arts, mechanics, and all departments of our manufacturies start their production with a plan or method, which is put down on paper and demonstrated by a model or pattern furnished after much thought and deliberation on the part of the originator; for this reason these productions are uniform, and can be accurately duplicated or modified to suit the will or purpose of those who are establishing the production as an article of commercial value. In view of these facts, it would seem to me



that if some of the fundamental business principles were applied to dentistry, our results would begin to show the same uniformity which characterizes other productions. Of course, this cannot be done exactly as it is in the manufacturing world, but the principles can be modified and applied to our necessities so that we may profit by them.

The increased facilities at our command, the advanced ideas and methods within our reach, all serve to increase our range of possibilities, but do not raise the type of man or his ideals; there must be fundamental or preliminary training along certain lines which will enable him to combine what he already knows, and what he can get with comparative ease, with the ideals and the latent abilities which he may possess. It is not herein claimed that all men are artists, but all men can be trained and directed from an artistic standpoint, so that there will be a general uplift, that the principles of dentistry, as taught since it was systematized, and taught at all, may be brought together and applied with our increased facilities to the highest artistic results. I believe there is the artist in every man. These tendencies are invariably shown in one way or another, and it would seem that knowing this fact, in a profession like our own, where the artistic reproduction is one of the greatest underlying principles, in the great mass unlooked for results could be obtained.

There was probably never a time when prosthetic dentistry was in the state or stage it occupies at the present moment, and this state has been characterized by one who is most active in establishing reforms in that branch as, "A disgrace." In view of these facts, it would seem to me that never in the history of our profession was there such need of strong men to direct and head off a backward movement. Men have fallen away from their own standards; men are graduating each year, and beginning practice practically without a standard; and men who twenty years ago were doing beautiful work for others, are content now to claim as their own work which would not be a credit to the average undergraduate.

Correction.

The following paragraph was accidentally omitted from the end of the paper by Dr. Charles F. Ash, published in our last issue:

In closing, I wish to express my thanks to Dr. William H. Taggart for his casting methods, to Dr. H. E. S. Chayes, of New York, for his development of the cast gold crown on a platinum base, and also to Mr. H. A. Gollobin, of Newark, who made for me the beautiful technic work which I have shown you this evening, and who is largely responsible for the development of these attachments.



Do Orthodontic Appliances Adversely Affect the health of Our Patients?—H Case from Practice.

By B. E. Lischer, D.M.D., St. Louis.
Read before the American Society of Orthodontists, Boston, Mass.

Now that the critics of orthodontics are abroad in the land, exhibiting an utter disregard for truth, additional data in refutation of their conceited counterviews may be of value. And though their case thus far has failed to rise above extreme generalizations without foundation in fact, there is ample evidence on every hand that their absurd and untruthful contentions are being seriously accepted in many quarters. Hence I offer the following interesting case from practice for your consideration.

Fistory.

On October 25, 1910, I was consulted by Dr.

C. B., a practicing physician, regarding his daughter

M—, age twelve years. On examination I found
a bilateral distoclusion, complicated by extreme labioversion of the upper
incisors and a pronounced distortion of the facial lines. I called the
father's attention to the fact that dento-facial deformities of the type presented by his daughter are almost invariably associated with nasal obstruction—usually adenoids. Whereupon he related that she had suffered
from chronic rhinitis for a number of years, for which he had frequently
administered the routine palliatives, but without success. I therefore
recommended consultation with a rhinologist, who subsequently found



adenoids and hypertrophied inferior turbinates. These were promptly removed, after which I began treatment for the oral deformity.

Reference to her record, Fig. I, will indicate the various stages of the treatment thus far administered.

This progressed in the usual manner for a period of two months with but one broken appointment on December 21, on which

PAREN	Copy	
RESIDE	NOC	DR.
DATE	SERVICES RENDERED	
1910		+++
_Oct	25, Consul., Imp.and Models, Photographs.	
Nov.	2,5,9, Upper Appliance.	
•	9,12,17, Lower " .	
	22,29, Treatments.	
Dec.	3,7,14, 1,23,31,	
1911		
Jan.	7, 14, 21, 25. Treatments.	+
Feb.	7, 15, 20, 27,	
Mar.	9, 14, 23, 27, 31,	111
Apr.	6, (R.call), 8, I4, 20, 25, 28, "	
May.	3.9, Temp.Reten.Appl.; 20, 29, "	
_ June	3, 10 , -, 24,	
	29. Sept. 2.	
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Fig. 1

day a telephone message announced that she was slightly indisposed. On January 25, a similar message announced indefinite cancellation of the appointment. Treatment was resumed, however, on February 7, when my attention was directed to a mild urticaria affecting the lips and nose, but which at the time was rapidly disappearing. On the 27th, illness again prevented her coming for treatment, and on the following day her father announced the return of the urticaria in more severe form. He also wished to know whether such attacks were common occurrences during orthodontic treatment, and I assured him that I had never had a similar experience, nor had I ever seen a report of one in our literature.

On the 29th, inquiry as to her well-being brought the reply that she was slightly improved, though he had called in Dr. T., a consultant, who was inclined to the belief that the urticaria was due to an irritation of the gastro-intestinal membrane, and that my appliances were, in all probabil-

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ity, instrumental in producing it. But my renewed assurance to the contrary was again accepted.

The patient reported at my office on March 9th entirely well, accompanied by her father, and our conversation naturally turned to the topic now uppermost in our minds. I have thus far failed to relate that the

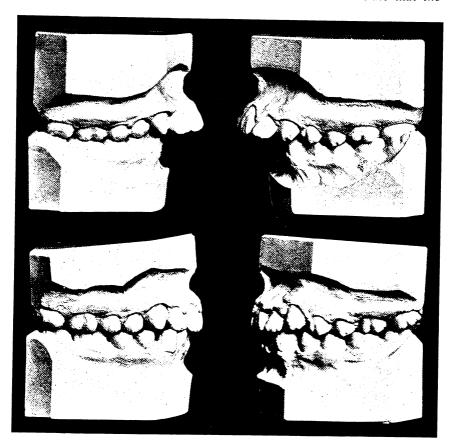


Fig. 2

appliances were of German silver, plain finish, in combination with silk and wire ligatures and intermaxillary elastics. And though some oxidation had by this time taken place, there was no undue corrosion of the metal to be noted. I explained to the father the chemical changes resulting from the action of the oral secretions on the metal, which had only recently been the subject of the most painstaking investigations (Grieves), and that digestive disturbances might ensue in cases presenting rapid oxi-



dation and corrosion. But his intelligent interest in the matter prompted me to plead for a postponement of decision, to which he readily consented.

Normal conditions now continued until the 30th, with consequent broken appointment on the 31st, and a prolonged interruption of treatment following. The skin affection again returned and reached its height on April 6th, when I was called to her residence, so that I might see the

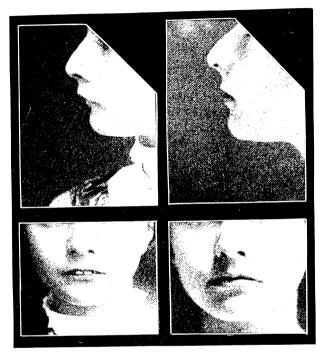


Fig. 3

severity of the attack, for by this time it covered the nose, lips, cheeks, parts of the neck, forearms and hands. Examination of her record card now revealed such a periodicity in the attacks that the father came to a definite conclusion. He now felt confident that a disturbance of the functions incident to the advent of puberty was the cause, and not the appliances. Though such disturbances are quite common, he had never had a similar case in a practice covering twenty years. Consultation with a dermatologist now established his diagnosis, and orthodontic treatment was again resumed on the 8th.

On May 2d, another interruption occurred, but without the urticaria, for by this time the indicated constitutional treatment had been administered. Nevertheless, by mutual agreement, the application of temporary

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retention appliances was now provided on the 9th, followed by visits to the office on the 20th and 29th, and June 3d. The appointment for the 10th was again cancelled, and on the 24th the father reported that menstruation had begun during the interim.

The malocclusion prior to treatment, and the progress attained at the time temporary maintenance was provided, are shown in Figure 2. The vast improvement in the facial lines is clearly set forth in Figure 3. Subsequent visits have shown her in excellent health and without recurrence of the urticaria.

But the experience which I have thus briefly set forth has often impressed me, and I cannot but reflect on my good fortune that the father, in this in-

stance, was a physician, a liberal-minded man, with whom one could reason. And again, had it been otherwise, and had the little girl fallen into the hands, e.g., of a family doctor with anti-dental proclivities, or an orthodontist of the "Rip Van Winkle variety" (who resorts to extraction of teeth not only to avoid the production of "Rooseveltian type of jaws," but "periods of stress," "shattering of the nervous system," etc., etc.), how promptly I would have been accused of malpractice. It is not difficult to imagine their supreme satisfaction in being accorded another opportunity to proclaim to the world: "Orthodontics is a failure." And how they would have extolled the petrified conservatism of the stand-patter!

But I am sure you will agree with me that my continuation of the treatment under the circumstances was justifiable, and that the results thus far attained are all that can be desired. A resumption of treatment for a short period this autumn will result in a complete and permanent correction of the deformity. And, finally, the amount of metal now anchored on her teeth for the maintenance of the newly established relations practically equals that of the treatment appliances, yet there has been no return of the urticaria, now that menstruation is established.

Classification and Terminology in Orthodontia.

Editor ITEMS OF INTEREST:

During the last annual meeting of the American Society of Orthodontists, held in Boston, September, 1911, Dr. M. N. Federspiel, of Milwaukee, read a paper entitled: A Consideration of Certain Types of Dentofacial Deformities. In this he called attention to a hitherto unrecognized abnormality, which occasionally complicates a malocclusion, viz., malposition of the mandible. It must be clear to every one interested in the treatment of malocclusion that if he establishes this as a fact (and



I understand conclusive proof is shortly forthcoming) it is one fraught with great significance.

In the above mentioned paper Dr. Federspiel also accepted the writer's proposed terminology for use in orthodontic diagnosis. The many discussions between sessions of the problems involved, and the numerous inquiries for reprints of the article in which it was first proposed (See The Dental Cosmos, April, 1911, or Zeitschrift für Zahnärtzliche Orthopädie, May, 1911) leads me to believe that it is a matter of vital concern to all interested in the advancement of orthodontics. It has long been evident that the most widely used classification of malocclusion was not only too limited in its scope, but suffered from the disadvantages of an abominable terminology. Hence it seems that its deficiencies have been endured for no other reason than that we had nothing else to take its place.

I realize that there is no court of last resort where questions of nomenclature might finally be settled; I am not unmindful of the difficulties ahead, nor of the obstinate preconceptions that must be overcome; but I believe thoroughly in the urgent need of this particular reform, and hence have tried to initiate it. I am anxious, therefore, that my scheme to put to the test, that its practicability be severely tried and criticised. Indeed, communications "pro or con" will be gratefully appreciated.

I attach herewith a clinical chart showing its application, and I hope to enlist your valuable aid in the cause to the extent that you proffer it the necessary space in your esteemed journal.

Very regardfully yours,

B. E. LISCHER.

St. Louis, Mo.

Clinical Chart of the Various Forms of Malocclusion.

Showing the Application of the Proposed Terminology

- I. Neutroclusion—This is a group term applicable to all cases presenting a *neutral*, or normal mesiodistal, relation of the lower arch.
 - I. Simple Neutroclusion—Applicable to all simple cases of neutroclusion; particularly to those between six and ten years.
 - 2. Complex Neutroclusion—Applicable to all complicated cases; the complications of any given case are best expressed by adding a descriptive phrase, as follows:
 - (a) Neutroclusion complicated by labioversion of the upper incisors.



- (b) Neutroclusion complicated by linguoversion of the upper incisors.
- (c) Neutroclusion complicated by infraversion of the anterior teeth.
- (d) Neutroclusion complicated by perversion of the right upper cuspid.
- (e) Neutroclusion complicated by mesioversion of the upper first permanent molars.
- (f) Neutroclusion complicated by linguoversion of the right upper first molar, etc., etc.
- II. Distoclusion—A group term applicable to all cases presenting a distal relation of the lower arch.
 - Bilateral Distoclusion—When both sides are distal to normal.
 The complications are best expressed by the addition of such phrases as enumerated under Complex Neutroclusion.
 - 2. Unilateral Distoclusion—When only one side is distal to normal.

 The complications again are best expressed by the addition of such phrases as enumerated above.
- III. Mesioclusion—A group term applicable to all cases presenting a mesial relation of the lower arch.
 - I. Bilateral Mesioclusion—When both sides are mesial to normal.
 - (a) Bilateral Mesioclusion complicated by linguoversion of the upper incisors.
 - (b) Bilateral Mesioclusion complicated by infraversion of the anterior teeth, etc., etc.
 - 2. Unilateral Mesioclusion—When only one side is mesial to normal. The complications again are best expressed by the addition of descriptive phrases.
- IV. MALFORMATIONS OF THE JAWS-

Note: All cases beyond the developmental period presenting extreme deformities of the jaws should be named in accordance with their pathological manifestations; their accompanying malocclusions are but symptoms. In most instances their correction lies beyond the domain of orthodontics.

- I. Macrognathism—Overdevelopment of a jaw.
 - (a) Mandibular, when affecting the mandible.
 - (b) Maxillary, when affecting the maxilla (very rare).
 - (c) Bimaxillary, when both jaws are similarly affected (also very rare).



- 2. Micrognathism—Arrested development of a jaw.
 - (a) Mandibular, when affecting the mandible.
 - (b) Maxillary, when affecting the maxilla.
 - (c) Bimaxillary, when both jaws are similarly affected.

 Note: Combinations of I and 2 are possible, though rare.
- 3. Mandibular Curvature—When the body of the mandible is curved downward, producing extreme obtuse angles with its rami, as in rickets.
- 4. Mandibular Malposition-

Note: The position of the mandible, which conditions the location of its articular fossæ, is not unchangeable, stereotyped or invariable. (Federspiel.)

- (a) Mandibular Anteversion—A forward displacement of the mandible.
- (b) Mandibular Retroversion—A backward displacement of the mandible.
- Congenital deformities, such as clefts, agnathism, polygnathism, etc.
- 6. Deformities due to extraneous influences, such as blows, fractures, burns, etc.
- 7. Deformities resulting from disease, such as fibroma, ankylosis, etc.





Local Creatment of Pyorrhea Hiveolaris.

By A. F. James, D.D.S., Chicago.
Read before the Colorado State Dental Society.

To come before the Colorado State Dental Society and present a paper upon this subject affords me great pleasure, and it will be my endeavor to give you something practical and not in line with old established theories regarding systemic complications, as I believe they have very little to do with either the cause or the treatment of the disease, or with the maintenance of immune conditions.

Let us begin at the beginning and say that pyorrhea alveolaris can, and should, be prevented in every mouth where pockets have not already developed, and this can be done by any dentist who will develop and use the simplest preventive measures. The only qualification necessary to this statement is that there must be some systematic method of procedure adopted so that definite results may be obtained.

We have heard much in our literature in the last few years of oral prophylaxis as being the new panacea of this dreaded disease, and the statement I have made above is a very good definition of the word "prophylaxis,"—a preventive treatment. But the procedures to obtain this result have been as numerous as the number of men attempting it, so far as its dental use is concerned. It has been my effort to work out and systematize a method of intelligent instrumentation, so that the word "prophylaxis" may be standardized as to its meaning in dentistry. I shall endeavor to give the results to you in my paper and to demonstrate the method in my clinic at this meeting.



Instruments Deeded.

In order to do intelligent work we must have instruments that make it possible to know what we are doing when removing deposits of calculi, and smoothing roughened enamel surfaces. Such instru-

ments are found in the C. M. Carr set of 150 planes; they are so constructed that they rest upon the tooth in two places, anterior to the blade of the plane as well as the beveled blade itself. This double bearing magnifies the sense of touch or feeling in the fingers, as much as a magnifying glass aids the sense of sight, and makes it possible to detect the slightest deposit or an etched or roughened enamel surface, each of which must be planed off, leaving a new and smooth tooth surface, which can subsequently be polished.

Until these instruments are explained to you, you will say that 150 instruments are an unneeded number, but when I tell you that there are really only three instruments in the set, a straight, convex and concave curve, varying in length of shank, degree of angle, degree of curve, and the position of the blade on the circumference of the handle, you will begin to realize that it is a set of instruments systematized to meet the different sizes of teeth and their positions in the mouth, so that it is always possible to have the instrument rest on the tooth in a position to plane its surface, in place of the old method of scraping the tooth. Using the tooth as a fulcrum increases the delicacy of touch, so that it is possible to detect the slightest roughened surface, and to know when you have it smooth.

Flow of Pus Stopped in One Creatment. In treatment of pyorrhea the greatest number of failures have been due to imperfect instrumentation; when it can be successfully done, you may be certain of results. The flow of pus can always be stopped at one treatment if all deposits and dead

peridental membrane be removed, and the alveolar border curetted where there is a ragged, uneven edge of the process extending into the pocket or covered with congested gum tissue.

If for any reason, such as abnormally shaped roots, or a merging bifurcation of the root, or the pocket running around the root in such a way that it is impossible to follow it with the instrument, and I find at a subsequent sitting a continued flow of pus, I consider that I have made a failure in that case and resort to the splitting of the gums over the pocket with a bistoury, and pushing the gums back with cotton pledgets saturated in aromatic sulphuric acid, leaving this packing for twenty-four hours, when I have a clearer field in which to operate, and can usually successfully remove all deposits. But in cases where I have made a second failure I resort to the use of Head's tartar solvent.



It would be folly for me to say that even with the treatment outlined I can save all teeth affected with pyorrhea, but if surgical treatment will do it I can expect results.

Creatment by Patient. The patient should be instructed in a method of massaging the gums with the brush in order to harden the gums and force them to recede to a point where the pocket is obliterated, and there is bone to support

the gum tissue. I inform the patient that this massaging of the gums is the one method they have of proving up my work. If I have made all surfaces smooth the gums will harden under this rubbing, and if I have missed any particle of deposit the gums will show a point of irritation at that place, and it can be subsequently removed.

It is not my intention to qualify my statement that pyorrhea can be cured in all cases, except where the loss of process has been so great as to remove the tooth's natural support and the application of a fixed retaining appliance would be insufficient to support the teeth.

Prophulaxis.

To again refer to prophylaxis, and go more into detail, I wish to say that prophylaxis is necessary to the maintenance of immune conditions, but contrary

to the general impression that seems to prevail, that it requires extremely frequent sittings, more frequent indeed than the average patient or dentist could give. It depends more upon the changed condition which has been brought about by the co-operation of the dentist and patient in keeping the teeth free from mucous plagues and stains, which is proof of the fact that all deposits have been removed, roughened enamel surfaces made smooth, and that the mouth has been mechanically freed from fermenting processes; also that the patient has complied with the requirements of thoroughly massaging the gums with the brush and fingers until the gums are hard and shiny, showing a clean, healthy glow. The length of time required to bring this changed condition about depends largely upon the systematic and thorough effort on the part of the dentist, and the ability of the patient to dexterously perform his part of the work in handling the toothbrush and in massaging the gums. Some patients will learn to do this thoroughly, more quickly than others, but all will learn, and the incentive they have in feeling that they are proving up your work will stimulate them to follow instructions more closely than the mere idea of cleanliness alone. I tell patients that during this treatment it is my business to keep their teeth clean; that I have them so polished that they can rinse them cleaner than they have been able to brush them in the past, and that their effort must be given to hardening the gums, which may be done by intelligent massaging: also that this is the only method we have of obliterating pockets, except that we sometimes have a bony granulation and



filling in of pockets following the surgical treatment, but that we can never count on the healing process doing this, and there is no way of bringing it about; that it usually comes in the process of healing where the shape of the teeth or position is such that food does not crowd into the pocket and cause irritation after the surgical effort has been made.

Polishing the Ceeth.

The polishing of teeth is accomplished by tapes and wood points in hand polishers, never using the engine in doing this work, as the roughened surfaces are too near the gum tissue to permit of a revolving

instrument being used, without damage being done to the gingival border, or tooth surface, and it is necessary to develop a technic whereby intelligent work can be done. My method is to first use a smooth grit corborundum strip on the approximal tooth surfaces, following with Cutter tape and the flower of pumice, the other tooth surfaces being polished with orange wood points in hand port polishers, noting by the touch all draggy surfaces and working until you feel the velvety finish which makes you know the surface is smooth.

Staining as a Test in Cleaning Teeth. The one point I wish most of all to leave with you is that we, as dentists, have fallen far short of requirements in placing our patients' teeth and mouths in such condition that they can do their part of the work, and it is my intention to show you in my

clinic a system of staining unclean surfaces of teeth, that will demonstrate what I am trying to tell you more clearly than I ever can in words. This staining fluid is composed of potassium iodide dissolved in glycerin, to which add an equal part of iodine, then dilute with water until it is not unpleasant. When used this fluid will not stain a smooth polished surface, but will stain all mucous plaques and roughened enamel surfaces, and will show on many teeth that look clean an area that has been subjected to fermenting processes which have continued for a sufficient length of time to have caused superficial caries, which has not progressed farther than to have dissolved the cementing substances from around the enamel rods, leaving the ends of rods exposed, thus causing the roughened surfaces above described, and which are very difficult to keep clean.

Fearing I have not made all points clear, I will hastily summarize my paper, and in any discussion it may merit, I invite questions with the hope that we may bring out some minute details of the treatment, such as overcoming the sensitiveness of teeth, etc.

Upon a patient's presenting for examination, make it a point to inform the patient that the usual order in dentistry has been reversed, and that our first effort will be to put the teeth and mouth generally into an immune condition; that a clean tooth never decays, and that a tooth does



not decay just because it is a tooth; that all other work, such as cavities to be filled, and teeth to be crowned or bridged, should be subsequent to prophylaxis, except the relief of pain in aching teeth, wherein we would use temporary fillings.

That to accomplish this work it is necessary for the patient and dentist to work together; that the patient is to be instructed in a method of caring for the teeth, and a future appointment made in order to encourage and assist him in such care.

Fads.

By A. E. BARKER, D.D.S., Denver, Colo.

Read before the Colorado State Dental Association, Twenty-fifth Annual Meeting, Boulder, June 29-July 1, 1911.

The expression oft repeated, that dentistry has made greater progress during the period of its recognized existence as a profession than almost any other, is not an idle boast of prejudice; indeed it comes most often from the laity interested only as observers, who have perhaps been impressed with its truth as a result of their personal experience.

We who have devoted our best years to the curing of the "tooth troubles" of humanity are proud to-day, and justly so, to be members of a profession that receives from the world such universal encomiums on the results of its labors.

The men, living and dead, who are spending and have spent much time and money in research and experimentation and from whose inventive brain there has from time to time evolved ideas and apparatuses of proven value to us, and through us to an appreciative populace, will always be remembered by us and honored for the good that they have wrought. Most of them "builded better than they knew," and gave to the profession methods that accomplished good beyond the fondest hopes of those who suggested them, in consequence of which many dental operations have been simplified, time has been saved to both patient and operator, the work made less arduous, and better results obtained.

On the other hand, fellow dentists, even the youngest of you could without doubt recall some much acclaimed invention or apparatus, material or *modus operandi* which was destined, in the belief of its promotors, to revolutionize our methods, increase our income and make our work mere play, which flourished but for a day and was discarded to the laboratory scrap heap of lost hopes as impractical, leaving those who are always looking for something new, sadder but wiser.



So long, however, as the human brain remains the active agent of progress, these experiences will be a part of our lives. The newer things are always desired and the old tabooed as out of date. It is natural, it is right, but in our work it often furnishes us with grief instead of joy, diversion instead of progress.

At the risk of being called a back number and non-progressive, I am using this opportunity to criticise the tendency of too many of our dentists to accept and adopt as good practice these numerous latter day "fads."

I want to caution especially the younger members of the profession, who in their desire sometimes, to find an "easier way" or even in their really laudable ambition to cater more to the esthetics than to the permanency and practicability of their work, may make failures that are costly and which, however beautiful, will not in the end be commended by the great majority of your patrons who first and most of all demand comfort and durability from your service.

The dentist who is always trying anything new, and who is constantly rushing away from the beaten path of proven methods, must often meet with keen regret, and there is no doubt but that his thoroughness and competency in any special division of our work will suffer much in consequence.

After all, our professional life is not so long that we can afford to expend a large part of it in trying to become equally expert in all the many operations that are now recognized as a part of our vocation.

If, after years of application, you know that you are especially proficient in a certain method of tooth restoration, and that method in your hands is a success, adhere to it strictly and give your patient the benefit of a perfected system, as to the results of which you can be assured there is no doubt.

I have in mind at this moment a one time honored member of this society, long since passed to the other side, who was recognized by those who knew him well as a gold foil operator of the highest class. With the old fashioned non-cohesive gold, he would build beautiful and permanent fillings in tooth cavities which most of us would pronounce inaccessible. This man did not deny the value and usefulness of the gold or porcelain inlay, but was nevertheless satisfied to adhere strictly to the methods with which he had become most familiar and which had brought him success and his patrons satisfaction.

I would much rather, in this day of so many methods of tooth restoration and preservation, recommend to the public the young dentist who has mastered the technic of making a perfect amalgam filling and who assiduously pursues that method, than the one who, after his short

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college experience, experiments successfully with something new, upon his patients who believe they are receiving a superior kind of service at his hands.

How often, my friends, in recent years have we been chagrined and even shocked at some of the bungling operations made in the name of the gold or porcelain inlay, and often done by men who could have given the patients splendid service on other lines, but who were beguiled from the level of their ability by the attraction of increased fees.

It is not my intention to say one word derogatory of the gold inlay method of tooth filling. As a matter of opinion I believe its advent, with the apparatus for its construction, to be of the greatest value to the profession and to the people whom we serve.

The inlay made from porcelain, taking into consideration the present method of construction, has not and will not, in my judgment, be so practical in the hands of the average operator, but it is not my purpose here to discuss the relative merits of these newer or so called progressive innovations, but merely to suggest that there is danger in too hasty an acceptance of all these "fads."

I venture the assertion, Mr. President, that more than one-half of the porcelain inlays that have been placed in the teeth of our patients, within the jurisdiction of this association during the past five years, which covers the period of their greatest popularity, have or should have been replaced before this with other and more satisfactory material.

The foregoing does not utterly condemn the porcelain filling, but I have made some investigation and believe the truth of my statement cannot be successfully disproved, and until such time as the method of construction shall be so simplified that the average dentist can make them more perfect in adaptation, in color and with more surety of permanent retention, ultimate success may still be questioned.

The gold foil filling for incisal surfaces and extensive contours has stood the test of years. The skill required for their perfect construction is within the ability of the average dental student to acquire and will bring to him in his practice more pleasure and more income, and to his patients more satisfaction, than any of the newer methods of tooth restoration.

Our dental magazines of to-day unfortunately are largely given over to the exploitation of some new and wonderful discovery, which, according to the advertisement, will displace old-time methods and place in the hands of the dentist who will pay the price, material, including care-



fully printed instructions for its use, which will enable him to outdo his neighbor in the character of his work and amount of his recompense.

Silicate Cements.

A great injustice is done the public and inestimable damage to the honesty of our intentions by the great number of dentists who are willing to try anything which will shorten their hours and increase their fees. I think I am not putting the case too strongly.

Less than a month ago a lady called at the office and showed me a number of teeth that had been filled with a silicate cement, which was not a success and for which she had paid a fee considerably in advance of what almost any of you would have been glad to receive for restorations with gold.

The patient paid the extra fee, not because she objected to gold, but because she believed she was getting a superior service. No argument could convince that patient that she had not been intentionally wronged. I am positive, however, such was not the case and told her so.

We will all hail the day when we can perform permanent and beautiful tooth filling operations with less arduous work for ourselves and more comfort to the patient, but we must approach that much-tobe-desired time carefully and see to it that our progress and reputations be not marred by the sacrifice of public confidence.

Prosthetic Fads.

We well remember, how a few years ago, the Griswold system of partial plates was heralded as a most successful method of retention, but like the old Condit idea of much earlier date, its use soon

proved impracticable in most cases, and who is there among us to-day using, in general practice, either the Griswold or Condit method?

Among recent plate innovations, which look splendid and have every appearance of being a long step forward, are the cast of Aluminum and Aerodentaloy, and yet I am told by prosthetists that both fall far short of being as permanent, as practical or as comfortable as the swedged gold or aluminum.

In late issues of our leading magazines, a material for the making of porcelain filling by casting into a mould is exploited and assurance given us by the cheerful advertiser that it makes a much better filling than cast gold.

I shall make no endeavor to catalogue all of the schemes designed to help us along operative and mechanical lines, but the paper would not be complete without at least making mention of one of the present day follies in connection with our dental therapeutics. I refer to the excessive use of the innumerable antiseptic washes, "cure all" mouth medicaments.

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Eurative Dentifrices.

That the dentists are largely responsible for this, in that they recommend to their patients a bewildering assortment of nostrums, there is little doubt. These recommendations are too often given,

because we have been generously supplied with samples and literature by the manufacturers, and not because such treatment is indicated in the case. I can fancy I hear some of you say that these things do no harm. I believe, however, it has grown into a dangerous "fad." No less an authority than Dr. G. V. Black, in a recent paper published in the ITEMS OF INTEREST, deplores the excessive use of germicidal antiseptics, and most of them contain a germicide. Speaking of mouth lesions, he says, "It is even better to discard drugs entirely and depend directly upon extreme cleanliness, stopping short of injury, as the most efficient aid."

Dr. Seelig, of St. Louis, is also quoted as having recently shown, by experiment, that a known quantity of bacteria in a clean wound will not produce suppuration, but if the same wound be disinfected with iodine and the same quantity of bacteria introduced, it will suppurate.

"These experiments," says Dr. Black, "add another proposition to those I have been discussing, and afford an additional reason for limiting the use of antiseptics in dentistry." The dentists of the country would do well to get together on this proposition, and stop the indiscriminate recommendation and use of mouth medicaments.

And so, gentlemen, one might go on and name many more labor saving and money making inventions and schemes, which continually tend to warp our judgment, lure us from the field of our greatest success, and overturn long accepted and proven practice.

I have no apology for any statements herein made; they may be criticised and perhaps justly, but if from the chaff there can be garnered one truth that will tend to make us more careful, that will impress upon us the fact that the people demand practical and useful results at our hands, the objects and purposes of this contribution to the exercises of the day will have been accomplished.





Second District Dental Society. December Meeting.

A regular meeting of the Second District Dental Society of the State of New York was held at the Kings County Medical Library Building, 1313 Bedford Avenue, Brooklyn, N. Y., on Monday evening, December II, 1911.

The president, Dr. E. H. Babcock, occupied the chair, and called the meeting to order.

The secretary read the minutes of the last regular meeting, which were duly approved.

Dr. Norman S. Essig, of Philadelphia, read the paper of the evening, entitled, "Features That Influence and Govern Our Progress in Prosthetic Dentistry." Dr. Essig's object in this paper is to elicit interest and cooperation in dental prosthetics, thus forestalling what seems to him a retrograde movement in that branch.

Discussion on Dr. Essig's Paper.

Dr. Nies. practical standpoint, but we wish to thank Dr. Essig for bringing to our attention the need of more artistic work in prosthetic dentistry. This is a subject to which an evening might well be devoted.

Dr. Essig's paper shows a thorough appreciation of artistic work. While it is true that much of this work has been relegated to the laboratory, it has been due perhaps not so much to the fact that it is considered inferior work, as that it is the only work that may be relegated.

Unfortunately for the majority of us who have watched the progress of deterioration, we are held responsible for the loss of the teeth, and

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therefore we do not get the opportunity of making the new ones. I have never been able, as Dr. Essig suggests, to construct the denture before removing the teeth and get as good results as if the teeth were first extracted and the impression taken afterward. The extent of recession of the gums, which may follow extraction, is difficult to anticipate, making it hard to determine just how the teeth should be set. Moreover, usually the teeth about to be taken out have lost their characteristic features, and are of little value as patterns for new ones. In pyorrhea cases, of course, it might be otherwise.

While much help in achieving artistic results is often gained by the presence of a natural tooth or teeth, it is surprising what pleasing results can be obtained by arranging and rearranging the teeth on a trial plate while the patient is in the chair. This should always be done at the time. It is necessary to have a stiff base-plate to do this. Air chamber metal is good and wire should be used to stiffen it.

Pulverized gum-tragicanth should be put on the back of all trial plates to prevent their slipping out of place while making these changes.

When the essayist says there has been no improvement in methods and results over the past, he probably refers to the artistic. The substitution of pink rubber for porcelain gums is certainly a step backward, but has not there been an improvement in method that has resulted inconsiderably cleaner, lighter and better plates? As one instance of improvement, I may mention the cast aluminum plate introduced to this society. There is also the lower bar plate, which is now coming into general use.

Our attention cannot too often be called to the necessity of cutting clasps after patterns made from the teeth and shaped on them. How the essayist succeeds in working 24-gauge clasp gold after first contouring it, would be interesting, and I would like to see him do it.

The lower gold plate of several thicknesses has many advantages, but it means a great deal of extra labor and skill. Most men, I believe, are using 26-gauge gold of 18 karat, with 27-gauge as a stiffener along the base.

Looking back twenty-four years to laboratory practice, I cannot remember a workman who could excel the workmen of to-day, giving the workmen of to-day the same time that the man of years ago used.

When I read this paper—and I read it three times—it seemed to take on a different phase each time I read it, and I am extremely glad to have heard it read the fourth time, for it still takes on a different aspect.

There seemed to be within Dr. Essig's heart, as he read it, feelings of alternate depression and elation; on the whole, he seemed to feel that



there has been a very great retrograde movement in twenty-four years.

I do not think Dr. Essig really means there has been retrogression; he says that prosthetic dentistry has stood still, and that to stand still means moving back. However, I think the atmosphere of the last part of his paper is rather optimistic, and I hope that is the atmosphere we will leave the subject in.

College Teaching. I expected that the college would be hit, because that is the easiest thing to hit, as Dr. Essig knows, since he has been in that work himself.

As far as the college is concerned, if any of you can picture the requirements of the students that come, you can realize what the handicap is to begin with. There is nothing that we can say must absolutely be required in technique work before a man comes into college. There should be more training schools, and I believe one of the best training schools is in the city of Philadelphia, where they are training both hands, thus making students ambidextrous, which would be one of the best things that could possibly be required in our particular work.

We have no control whatever over the preliminary requirements, especially in this State, where the requirements are simply set down as so many points to be gained, and these points may be gained as a student chooses. Consequently, when a man applies for entrance I do not see how it is possible to find out (unless it were by absolute laboratory tests), whether he has any of that skill which he should have.

As far as the course is concerned, twenty years have shown a marvelous change. I always inquire when I hear a man criticize the work of the college, "How long is it since you have seen what the college is doing? Come and see." We are endeavoring to do the best we can under the conditions, as we find them; and if Dr. Essig next month would go out to Chicago and view the gathered work of the colleges from all over the country, and see what men are endeavoring to do to raise the standard of teaching and requirements, I think he would perhaps feel a little bit better in regard to the student proposition.

The essayist speaks of the making of moulds. Now, gentlemen, I confess that we have been fighting for time to do the work we have to do to-day, and to add another requirement would seem to be almost impossible; and while perhaps I might agree with Dr. Essig that that would be desirable, I cannot see where there is time to do it, added to what we have now.

I hope that in view of the fact that we expect within the next year or so to have the men practically go before the State Board and pass their examination in anatomy, physiology, and chemistry, that the third year may be devoted to more of the practical work. That is what we

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had hoped for in the fourth year, which, unfortunately, due to circumstances, had to be withdrawn. It was with great regret that the fourth year was abandoned. I do not suppose any one but the undergraduate would object to the fourth year, and he would never object if he knew the advantage it would be to him in better fitting him for his life work.

As to specialization, I hardly agree with Dr. Specialization. Essig. I think orthodontia stands by itself. Prosthetic dentistry includes, or rather has for its scope, the making of some of that work, but I do not think that has anything to do with orthodontia at all. I do think this, and I said this at Schenectady the other day: That the fields of operative and prosthetic dentistry are coming closer and closer together, so that you can hardly distinguish between the two. The inlays, gold and porcelain, as they are made today, really are prosthetic work; made out of the mouth, and then inserted in the cavity.

As far as mechanical work is concerned, I think that crown and bridgework are specialties of prosthetic dentistry, but I do not think they could ever be specialized; not in the way Dr. Essig would indicate.

Dr. Meyer, New York. I do not believe that the mechanical dentist has deteriorated. As a rule, he provides better work to-day than twenty or forty years ago, greatly due to the facilities supplied him by the experienced

laboratory men now obtainable.

The dentist of to-day must be a Jack-of-all-trades in order to keep control of his patients and their connections. Increased expenses demand that he do all that he conscientiously can to increase his income, for the cost of up-keep in a practice was never so great as now. We admit that a general practitioner cannot be perfect in all branches of dentistry; he will do better in one or the other.

A specialist must be an artist; he must have resources in his own mind where they are concealed from others, and no one can bring them out of the storeroom except when the occasion demands. In other words, such knowledge cannot be imparted to others. We have artists to-day, as we have had forty years ago.

But we cannot all be artists.

I am sorry that the essayist of the evening is somewhat inclined to be disparaging. He fails to mention the beautiful work known as continuous gum, admitted to be the nearest and most perfect counterpart of nature that can be made by dental science and skill.

The paper of the evening is so involved in words and long sentences that it is difficult to apprehend what the writer is driving at. The student



must be well grounded in the principles controlling the various fundamental conditions before he can effectively apply them.

The man who has a good training in the office or laboratory before entering upon a college course would be particularly fortunate in this regard.

As to specialization—I would not advise a young man to attempt it for the following reasons:

- 1st. When a denture is completed and in the mouth, you cannot expect the individual to return to you for another until from fifteen to twenty years.
- 2d. The person for whom you have made a denture will not recommend you to his friends for reasons that are self-evident.
- 3d. The profession, as a rule, will only send you a patient after they have exhausted their own skill and have failed.

There is no need for using different grades of plaster. I have used but one kind in 44 years, and with varying manipulation I am able to apply it in all purposes.

I cannot agree with the essayist that rubber possesses any advantages over metallic bases, except in the lesser cost of material and time spent upon it. But this should not influence opinion when we are reaching for the ideal.

The system of clasp construction must be adapted to the case in hand, and the artistic workman will be governed by the conditions presented. The conclusion therefore is nothing more than the difference between good and bad.

Years ago we made, and used, the following bases:

Platinum and continuous gum (king of all plates).

Gold plates with single gum teeth.

Silver plate with single gum teeth.

Rubber plates with block teeth.

To-day we use the following bases:

Continuous gum.

Gold plate with rubber attachment.

Aluminum cast plate with rubber attachment.

Aluminum swedged plate with rubber attachment.

Watt's cast plate with rubber attachment.

Rubber plates.

The moulds and shades of teeth have improved.

The casting of inlays, in conjunction with bridgework, and the casting of small gold plates, are steps in advance.

We have learned to make a plate stay in the mouth, where no teeth or palate is present.

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The etching of teeth. The staining of teeth. We have better metal for dies. The mechanism and equipment for making plates have improved. The shade ring. All these things are evidences of progress.

Fees for Prosthetic Work.

Mr. President, the only way in which I think dentistry has deteriorated is in not charging enough for prosthetic work. Forty or fifty years ago they charged as much as we are getting to-day.

Just think for a moment. Suppose we obtain \$300 for a set of teeth. What would that cost the individual? That is \$30 a year, or eight cents per day. Suppose we get \$80 for a rubber plate. Say the minimum is ten years, how much does that cost? \$8 a year, or two and a quarter cents a day. Just explain that to a patient.

I claim that we are not justly compensated for the work we are doing, but as long as the other man is willing to cut prices, we can do nothing.

I had a patient come to me and say, "Dr. Meyers, don't you know me?" I said, "No, I don't remember you." "Well, you made me this set of teeth twenty-seven years ago." Then I got mad. Twenty-seven years ago I charged \$50 a set, less than than \$2 a year, less than half a cent a day!

I had a case in point this afternoon. A lady wanted repairs. I asked her who made the teeth. "Dr. Barlow." "When?" "Thirty or thirty-five years ago." I believe Dr. Barlow has been dead over thirty years. There is a case that has never been repaired, and has done service in the mouth all those years.

Dr. Ruyl. to-night, and am glad to be one of the first to congratulate the essayist. It is a subject in which I have long been interested, and on one or two occasions I have tried, in my humble way, to bring it before the profession. It has always been a source of regret to me that more men have not taken the interest in this important subject that it rightfully deserves, for, to my mind, there is more to be done, and more skill to be displayed here, than in any other branch of our work.

Too many dentists trust entirely to outside mechanical men, and do not see a plate until it is completed. Having given out only the impression, bite and color (not even mentioning the size of the tooth), they trust to luck and hope for success. They often treat a mouth in which great absorption has taken place, the same as one with hardly any. That they should take pains to restore the natural shape, and blend the colors of the teeth, never occurs to them. In the natural set there are at least three varieties of color, but in a full upper artificial denture you will rarely see



more than one shade. Nor can you blame men very much, because their instructions on this line have been entirely inadequate.

To begin with, the dental depots offer sets all in one color, and our teachers in the colleges have never suggested any other arrangement. I entirely agree with Dr. Essig that the students' instruction in this line is very limited, so much so that ninety-five per cent. of them do not consider the subject of any importance at all. Scarcely any other result can be expected, when we consider that the demonstrators are mostly men of little practical experience, often recruited from the ranks of the graduated students themselves, and receiving a salary of \$35 to \$50 a month.

I also agree with the essayist that all men cannot be artists, but they could be trained to do good, satisfactory work, if the demonstrators were experienced men and had artistic ability.

The requirements of our dental colleges are not adequate. Students are only expected to make plates. Oftentimes they have them done outside and turn them in as their own work, with the idea that when they graduate they can have some one to do this work for them. Consequently, they give little time and thought to this branch of study while at college.

I venture to say that a great percentage of the students graduating to-day, if called upon to make over an old plate in new rubber, without taking an impression, would be utterly unable to do so. Not only that, but half of them do not know how to mix plaster properly, to say nothing of setting up teeth. The other day, in speaking to a student of one of our colleges, I was told that when taking an impression it was necessary to leave the plaster in the mouth until it became so hard that it had to be cut out.

Small wonder when men fit up their offices that they look only for two operating rooms, a dressing-room and a reception room, and never think of a laboratory, or if they do fit up one it may be in a corner of the room, where they will put up the usual bench behind a screen.

I think the price that the dentist gets for his work is not enough to warrant his spending the time to make an artistic plate. When you compare the average price, say \$20, against some of the prices we get for work done at the chair, it is entirely too little. Many of the feminine portion of our patients think nothing of paying \$50 for a gown to be worn only a few times, and we often produce a work that stands ten years of constant wear for much less.

Since I have been in practice I have heard very few papers on prosthetic work. It certainly has not kept pace with the long strides recently made in other branches.

May I clear the atmosphere just a little? I think Dr. Billyer.

Dr. Ruyl has had his information given him in an ambiguous way. The taking of an impression, as

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taught in college to-day, is practically identical with the methods of the orthodontists. If you can realize what it would mean to a first-year man to properly take an impression, according to orthodontic principles, allowing the plaster to become sufficiently hard to take the tray off and lay it aside, and take out that impression in sections, you can see that probably the first half dozen cases will not be done with the same skill that he will have later in life. However, I think our students could show to you some specimens you would be perfectly satisfied with.

I do not agree with Dr. Meyer that prosthetic dentistry of to-day is in advance of what it was forty years ago. I do not remember forty years ago, but I do thirty, and I remember distinctly seeing some of the work that was completed thirty years ago, which was far ahead of anything I see to-day, from the general practitioner.

On the other hand, I believe there is a good reason for that, and I believe Dr. Essig has, in the main, stated it. The busy man in general practice must decide upon one of two alternatives: He must either become an operator or a prosthetic man.

I think that something like twenty years ago, in a discussion of this subject in Newark, N. J., I took the stand that the day would come when the two would be distinctly divided and stand in the same relationship that the oculist and the optician do to-day. I still believe that that day is coming. In making artificial dentures the ordinary laboratory is not a success. I believe I get better results in sending work to a laboratory that is thoroughly equipped and has competent men for each branch of the work.

To carry the whole load on my shoulders and pretend to give the patient the best that can be given does not seem possible, but the dentist who takes the ground that he is belittling himself, that he is dropping down by making a specialty of prosthetic work, certainly does not know what he is talking about, because there is no art in the dental profession where a man has so many chances of showing his capabilities and rising so high, as in that particular branch.

I agree with Dr. Meyer that a large percentage of the bridgework of to-day is a curse to the patient and the profession. I believe that crown work is the same. It has its place, it is indispensable, but, gentlemen, there are more crowns placed in the mouths of people to-day for the dollars, or because the crown is the easy way out of it, than there are for the true service they will render the patient. The introduction of the casting machine has made possible perfect occlusion, or as nearly perfect as possible, and has raised that standard, so that much of the bridgework



being done now, by advanced men, is very much to their credit, and to the credit of the entire profession.

I believe, as I said before, that the time will come when the prosthetic branch of dentistry will be a distinct department of dentistry, and I believe that is what it ought to be.

A few years ago a class was started under the direction of Dr. Weeks, and I was one of the members of that class, and the teaching was mainly on the technique of cavity preparation.

One of the first things we were given to do in that class was the moulding of teeth in the plastic, putty-like substances, and after that carving out the teeth from square blocks of plaster. Nothing I have ever done before that time, or since, has helped me so much as that particular course. I never realized so well before, just what the shapes of the various teeth are. That course gave me a better idea of the artistic possibilities in handling prosthetic work.

I do not know of any subject that is more important to the profession at the present time than this. Any one who could have observed the quality of the work that was done thirty years ago, and compare it with what is turned out to-day would say it makes the disgraceful condition of prosthetic work in this country something that ought to bring a blush of shame to every self-respecting dentist.

I believe that I know why this deterioration has taken place? The main reason I think is a lower grade of professional ideas in the men, as they have come into the profession from what existed at that time. I have a deep feeling of sympathy for Professor Hillyer in this respect, and I feel that he is altogether too sensitive in the manner in which he takes up this subject.

When I criticise present conditions I want to assure Professor Hill-yer that there is nothing of a personal nature in it. All of us who know Dr. Hillyer realize that the men who teach prosthetic dentistry are not at fault in this matter. The fault rests with the bad material that they have to deal with, and out of which they must produce dentists. The student as he goes through the dental college to-day shirks the prosthetic department as he does the plague. He gets out of it in every way possible. That is the experience and the view of careful observers, and let me say to the professors of prosthetic work that they attempt to deceive them in regard to this very point. It is not to be supposed that they want the professor of prosthetic dentistry to know this. They do everything possible in their attempt to get their degree, to avoid having the professor of prosthetic dentistry observe their dereliction in this respect.

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The reason may be found in the fact that they are looking forward to practising operative dentistry, and they look upon this work as something beneath them.

I feel deeply upon this subject, Mr. President; I feel deeply upon it because I consider myself a family practitioner. I think that the responsibility of replacing any part of the denture that is lost rests with me, and I must totally differ with my good friend, Dr. Van Woert, when he approves the general laboratory.

I believe that is one of the greatest curses in dentistry. How can we ever do our duty by our patients if we are to depend upon an institution of this kind?

It is true that it is impossible for the busy operative dentist to go into the laboratory, but we lack in this country what has been so well produced on the continent; that is, the trained technical workman; a man who, while not a dentist, is well trained to do in the laboratory the best of work under our prescription and protection. That is what we lack.

The main point that impressed me in the paper was the plea for natural restoration; a restoration of lost teeth that defies observation, and here I agree with Dr. Van Woert. It was not an uncommon thing thirty years ago at dental meetings and dental clinics to see the most beautiful products of this kind exhibited before dental societies. It was a very common thing in those days, and the effort made by the essayist to reintroduce an interest of this kind is one that meets with my indorsement.

I sympathize deeply with Dr. Meyer's views in some respects. I agree with him that we have materials at our command for producing prosthetic results in a way that we never had before. We have the conveniences, but we do not utilize them.

I do not think I have been exactly understood, in that I was supposed to have said that dentistry along prosthetic lines had gone backward. What I said in my paper was, "If it shows no progress, it certainly shows a deterioration."

I think Dr. Hillyer thoroughly entered into the spirit of the paper, and I was glad to see that even those who differed along certain lines agreed with me in the most important phases of the subject, and although Dr. Meyer appeared to differ with me at first, he almost entirely agreed with my views at the end of his remarks.

The result of my paper is very pleasing to me. I am more than glad to note the spirit in which it has been received and discussed.

Reverting to Dr. Meyer, there is a question I would like to ask, "How



he can make cross-pin teeth last twenty-seven years?" It is really features of this kind in which I believe we have gone backward.

Naturally, dental depots will do their best for men who order the largest number of teeth. Any mercantile house will discard the use of material for which they have no demand, hence the passing of the straight pin teeth. I do not understand, however, why there is no demand for the straight pin teeth, if every one feels conscientiously upon the subject. I have had a great deal of difficulty in getting what I may term as raw materials. I cannot buy a great many things we used to get years ago. I do not know how it is in New York, but I know that in Philadelphia we not only cannot get materials to keep up our standard, but the standard of the average production in prosthetic dentistry I see is away below what they were in former years.

As far as rubber work is concerned, it is simply a bid to be careless in the large majority of instances. I was particularly glad to hear some one mention a rigid base-plate. We formerly used swedged air-chamber metal as a base-plate on which to take our articulation. No one uses that material any more. We do not see anything but pink wax base-plates for this purpose, which to my mind are inaccurate.

The absolute reproduction of the natural teeth is taught in a way; but I still maintain that we are not teaching mechanical dentistry generally from a sufficiently artistic standpoint. There is, however, no reason why this should not be done.

Artificial teeth should not be backed with flat backings. It is not natural for the tongue to come in contact with such a surface; it does not help in speech, and is certainly most inartistic in every way.

The back of the teeth should be just the same in an artificial denture as in the normal mouth. These are the features that are neglected, and I think that after we study this subject more we will not feel altogether proud of the work of to-day.

I have probably had as much experience in mechanical dentistry as most men of my age, and I certainly do notice a distinct deterioration in the last twenty-three years.





Colorado State Dental Society

Discussion of Paper by Dr. James.

Dr. Kamm.

It affords me great pleasure, indeed, to be asked to discuss this paper, read by a gentleman who stands so high in the dental profession, and one who is con-

sidered an authority on this particular work. I have many things for which to thank Dr. James personally. For taking me to his private office in Chicago, showing me how he worked, and the results of his work. The question of pyorrhea and prophylactic treatment seems to be the keynote to the situation. Now is the time to start the work against caries and pyorrhea, to prevent destructive conditions. We find the careful conservation of the structure in the original condition worth more than to wait till it is broken down, and then do repairing. I am under the impression that the average dentist does not understand the true meaning of prophylactic treatment. It is not the mere visiting of the dentist from time to time, but the carrying out of a definite system. A clean tooth never decays. Pyorrhea never develops where the gums are kept free from foods or other deposits.

The essayist spoke of instruments. There is no doubt that the Carr instruments are as good as any that can be purchased, yet I am under the impression that Dr. James could get results with any instruments; it is by the fingers plying the instruments that the work is done. I make what might be called a rather broad statement, that he could do with a few instruments what others could not do with many. I think the average man feels discouraged because he fails to stop the flow of pus, and because he does not get down to the deposit, he thinks it cannot be cured. I never advise the extraction of teeth. It is better to have the root in the gums.

Dr. James has told us about the deposits on the roots of the teeth, that the gelatinous mass adheres to the roots, and in that is deposited germs from the blood, saliva and mucous. If the roots and the coronal portions of the teeth are polished highly enough the gelatinous substance will not settle on the teeth. The force of the brush will remove it with careful use. You can easily detect when a patient is neglecting the different parts of the mouth. The different colors of the neglected parts will show the condition and correctly indicate the treatment.

The best way to polish the roots is to use the orange-wood stick and the brush. There is no other way to get results. With the orange-wood you do not injure the gums, and you must polish beneath the gums before the pus pocket is eliminated. There are no dentists in this room who would send their patients from their office with a finished piece of work without seeing that the surface was highly polished. This prevents the



collection of foods. It is essential that the crowns of the teeth should be polished to prevent the lodgment of foods, to prevent decay and pyorrhea. It has been brought out several times to-day that the proper care of the teeth by the patient should be insisted upon by the dentist. As Dr. Warner said this morning, the patient should be instructed in the first place how to use the toothbrush properly, and to use it in all parts of the mouth. I have gone to the store and picked out the brushes in order to prevent patients from getting something useless. I wish again to thank Dr. James for his personal favors to me, and for his kindness, and for his very comprehensive paper.

President. out, that there was nothing more to say. I am glad to note that we are just beginning to discuss the subject from the proper standpoint. The subject is now open to general discussion. I invite a full and broad discussion. I know it is modesty that prevents some of you from unbosoming yourselves.

We are fortunate in having Dr. James at our Dr. Geo. Y. Wilson, Golorado Springs. The subject which he has so ably presented is one that is enlisting the attention of every member of our profession. Some in a greater, some in a lesser degree, but every dentist must see in the mouths under his care the necessity for local treatment of pyorrhea alveolaris, either from the standpoint of prevention or cure.

It was my very great privilege some months ago to spend a week with Dr. James in his office watching him treat pyorrhea. I have always enjoyed watching the other fellow work, but I have never enjoyed watching any one as I did Dr. James at that time. I am, of course, very much interested in this line of treatment of mouths, and I saw at that time what could be accomplished by a thoroughly worked out technique in removing deposits from the teeth. I saw mouth after mouth, which bore evidence of having been attacked by this disease, in some cases where it had apparently progressed to an alarming degree, restored to usefulness; teeth firm and free from soreness; gums normal in color and hugging tightly the roots of the teeth; patients all happy and full of enthusiasm in the care of their mouths.

It is inspiring to see Dr. James at work. He goes at it with enthusiasm, so much so that it is contagious. After being in that atmosphere, and seeing the wonderful results he had obtained in nearly every instance, I left Chicago and came back to my office feeling that I could cure the worst case of pyorrhea which might present. But it is not as easy as it looks, and I have to confess to failure in a good many cases; but there are reasons for this.

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In the first place, I have not always spent as much time on a tooth as the case demanded, and my fingers, no doubt, have been deficient in the requisite degree of skill. In the second place, I have never been able to save enough money with which to buy a set of those magic planes. Thirdly, I have not always succeeded in furnishing the patient with the necessary enthusiasm to care for his own mouth properly. In other words, I have failed many times as a teacher at the chair.

From the beginning of time there has always been at least two sides to every question, so in this question of the treatment of pyorrhea we find eminent men taking different views, but they are all of one mind when it comes to the question of removal of deposits. They all agree that this is the first essential, and success may be expected only in proportion as this work is thoroughly done.

Generally speaking, it is not so much the make of instrument as the man behind the instrument which counts. Some attain success with the Harlan scalers, some with a Smith set, but Dr. James gets his beautiful results by the use of the Carr instruments.

In addition to the thorough removal of deposits, Dr. James speaks of smoothing rough enameled surfaces and "roughened, uneven edges of process." It seems to me that the failure to attend to these two items would account for many unfavorable results.

Black's Agglutinin. Our essayist makes mention of systemic complications; says a good deal along the line of prophylaxis, and has said little about medicine. In connection with these points, I would like to quote from an

editorial in the June ITEMS OF INTEREST:

"An important fact, which the writer believes is a discovery by Prof. Black, is that before calculus can find lodgment upon the teeth 'a colloid precipitate, inspissate or agglutinating substance must first be formed and deposited on the teeth or other solid substance.' He states that the precipitated particles of calcium salts find lodgment in this material. This contribution to the knowledge of the accumulation of calculus is of tremendous importance, since it must furnish the first step toward a method of prevention. Consequently, it would seem that a new word should be added to dental nomenclature. Unless Prof. Black, himself, or some other scientist can find a better term, may we not hereafter speak of 'Black's agglutinin' when describing this first essential stage in the formation of tartar?"

All operators, of course, recognize the need of keeping the teeth free of tartar. Prof. Black announces that the deposition of "agglutinin" is a prerequisite to the lodgment of tartar upon the teeth. Therefore, if the deposition of "agglutinin" can be prevented, the teeth will be free of



tartar. Prof. Black says: "My present thought is that the agglutinating substance is the product of some fault in the general metabolism going on in the body, and that this ought in some way to be reached and corrected. This probably can be accomplished after sufficient observation by numbers of persons." Thus Prof. Black sets up a signpost which points to the path which will lead toward a method of preventing the accumulations of calculus within the oral cavity.

Prof. Black, himself, has already discovered that under specific conditions a saline cathartic, such as Epsom salts, will stop the deposit. In his own mouth he can control the deposit, bringing it on or stopping it at will.

To those who assert that all forms of pyorrhea are purely local in their origin, it may not be inadvertent to point out that speaking both of salivary and serumal calculus Prof. Black declares that accumulations are dependent upon constitutional conditions.

Speaking of local treatment against calculus, it will surprise many where Prof. Black says that no medicine at all is the best treatment, and especially that no antiseptic whatever should be used, and absolutely no tooth powder or paste of any sort.

Frome Creatment with Spray
Apparatus.

Dr. James says that when the mouth has been put in perfect order, frequent sittings may not be necessary. It seems to me that this depends largely on the patient, and to what extent the disease had progressed, whether there had been much destruction

of tissues, etc. In most severe cases, unless I can see the patient about once a month, I find that he loses interest, and I find him gradually getting back into his old neglectful habits.

I have one patient who has worked out for himself a very effective means of preventing the formation of deposits. He has fitted up in his bathroom a hose with a nozzle, so arranged that he gets a pressure of 110 pounds. He directs this jet against all gum and tooth surfaces every morning, and where formerly for some years each month I had to remove large masses of tartar from his teeth, now he has been able to go six months at a time, and even then I have found only a little deposit. But he has discovered that he must use the jet every morning. On one occasion he was confined to his bed for some days, so that he did not use the jet, and tartar formed to such an extent that he could not dislodge it. It has been the same on one or two occasions when he has been out of town for some days, and did not have access to his appliance.

There are so many valuable points in this splendid paper by Dr. James that I think he has done us a very great service in coming from



Chicago to present it to us. Personally, I am very grateful to him, and I want to thank him for coming.

It has been said, in connection with every treat-Dr. Geo. R. Warner, ment that is recommended for pyorrhea, that it is necessary to remove all deposits. That seems like a very simple statement. Dr. A. H. Merrit, of New York, has done a great deal with vaccine. I hear from him that proper sealing is a necessary and essential part of the treatment. I have always accepted this, and believe when tried it brings about the best results. It is necessary for me to confess that I have been unable to remove all the deposits in bad cases from all the teeth. This spring I had an introduction to the instruments that Dr. James speaks about. I saw them at Minneapolis four years ago at the National Association meeting there, and in my superior wisdom considered there were too many. This spring I decided that I would give them further investigation. I purchased a set, took two weeks' instructions from Dr. Carr, and I must admit that I have accomplished results that I had not accomplished before. It makes all the difference in the world who has the instruments; it is "the man behind the gun" that does the work. But if one could accomplish results with inferior instruments, how much more could he do with these? And if I saw such a wonderful improvement in two weeks, there must be something in the instruments. Dr. James has given us a very good paper, and there is more in it than he has written. Dr. James will show us more to-morrow in the clinic, and we can then better appreciate what he has written to-day.

Use of Stains in Cleansing. He speaks of a stain; that has been a very great help to me in aiding the patient to see how the teeth can be cleaned. It will not wash off with water, but we can take that horrible brown stain off. This deposit or glutinous substance does not show to the

naked eye. But when we show the patient how we take out the stain, it is very easy to convince him that he is not keeping his teeth clean. I think the brush should be used several times a day. A patient of mine asked his wife how often she cleaned her teeth, and she replied, "three times a day." He said he "let his go until they felt furry." That man had me polish his teeth, and he got so that he spent half his time brushing his teeth.

Systemic Origin of Pyorrhea. We have the question of systemic pyorrhea, and if it is systemic the only way to cure it is by systemic treatment. Whenever they do that we will accept that theory. Dr. Smith, Dr. James, Dr. Skinner, are curing cases daily by local treatment; that ought to

prove something. No doubt the system has something to do with it. It is a question which is the cause. If we cure pyorrhea, the patient's gen-



eral health improves. We will have to conclude that local treatment is successful.

I was very much interested in Dr. Black's article, the most valuable paper we have had for a long time. Dr. Merrit wrote a paper on mouth washes three years ago for the National Association at Boston. He discussed mouth washes and stated that mouth washes are a delusion and a snare, and I believe he is correct. It is certainly a great pleasure to have the opinion of so eminent a man as Dr. Black on this whole subject.

I really had no intention of saying anything on this subject, but I want to compliment Dr. James upon his paper. I have visited his office, and know what he is doing. There are many in Chicago who are doing this work. You should go there and see him operate. This reminds me of the man who had a great reputation for roasting duck, etc. When his friend ate this delicious duck with him he remarked that no one could carve a duck as he did. Then he said. "Did you ever see my friend, Joseph, carve a duck? No? Well then go to see him, no one can carve like Joseph." When he went to see Joseph, Joseph asked if he had seen his friend Fred carve, and said that no one could carve like his friend Fred. That's the way in Chicago; they tell you, "You should see James operate; no one can do it like James."

I believe with the others that have spoken, that there is no doubt that pyorrhea is of local origin. It is due to the irritation in the mouth. I think the conditions that exist among civilized people at the present time have a great deal to do with the condition of the teeth. The methods of living have much to do with diseased conditions of and surrouning the teeth. I remember in Chicago when Gen. Dorsey had charge of the museum. There was a skull of a prehistoric man 35 years old, cusps worn off about one-third, showing the teeth were in the best possible condition. In another skull of a man about sixty-two or sixty-five years old nearly the entire crown was gone, but the bone was thick and heavy, and there was a great development of the jaws. How different it is in these days; teeth not worn down at all, getting loose, the cusps practically unworn, and very long. I think that decay and loosening of the teeth is largely caused by our method of living.

Another point that has occurred to me is that it is often discouraging when one has not had considerable experience to undertake the work. When he gets a bad case it looks hopeless, and he does not feel inclined to do the work, and then, again, it requires special skill. I do not think a man can go into it at once, because the most important work is not visible, and it is all done by the sense of touch. To me it is something similar to developing skill with the stethoscope, using

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sound and the ears. When familiar with its use the physician can detect the condition of the lungs, or recognize errors in the pulsating of the heart. It is like a violin player; some one has said that only one in a hundred who begin the violin can master it; the player must depend upon sound, hearing and fingering in order to get the fingers in position to produce the proper notes. It is the same in treating pyorrhea. We take the instrument, and feel through it, and depend on a keen sense of touch to locate the deposits. I have used the stain that Dr. Skinner speaks of, and think it is excellent.

In regard to treatment, I think the doctor has suggested about everything that is good. Use a good stiff brush on the gums.

Dr. U. C. Smedley.

What does Dr. James do to relieve the acute symptoms?

I have heard very little about the brush. I think

Dr. Whitson. it is quite as essential as anything. For the prophylactic treatment we need a brush with stiff bristles,
one that will get into the recesses. Order three or four, so that the patient

one that will get into the recesses. Order three or four, so that the patient will always have a dry one.

I wish to ask Dr. James about one point. After **Dr. McWhorter.** he gets a fairly good healing of the gums, and still finds a pocket, what is his treatment for eliminating that pocket? I hope he will make that clear, because it is my present trouble. Food collects in such places, and it is impossible for the patient to get it clean or keep it clean.

Does it not seem that we are losing sight of the essential fact that numerous cases of pyorrhea occur, and that there is no universal treatment of pyorrhea any more than there is for any of the diseases of the human body; no

any more than there is for any of the diseases of the human body; no one toothbrush will serve for everybody; diagnose your case, and treat according to the demands of that particular case. Dr. James referred to stiff bristles the same as we need for hair. Dr. Jackson and I do not need stiff bristles to go through our hair. (Laughter.) There are some gums, and certain conditions of the mouth where you cannot say that such a toothbrush would be the best.

We have many cases of tuberculosis here in Colorado, and I do not know that I ever saw a patient that was seriously affected who had a healthy mouth. I come to the conclusion that tuberculosis interferes with the gum tissue. We must take into consideration systemic conditions. Unless you have good blood supply, it will be difficult to cure any condition until you restore the system to the normal. Syphilis influences pyorrhea. I do not say that these conditions are the origin of pyorrhea, but pyorrhea is influenced by these systemic conditions, and we must consider



the treatment from that standpoint. I have been treating a case for three years, and I guess I have "cured" that case about fifty times. (Laughter.) After getting it cured, and in a perfectly healthy state, the man comes back again, and comes just as faithfully for new treatment. We have difficulty especially with one tooth, and I know that the tooth is absolutely sound. I am sure that the pocket is from a secondary symptom. In a case of pyorrhea I think no one can say that it is cured, and will remain cured. I always tell patients that we have to watch very carefully, that there is great liability of recurrence.

I will answer the last gentleman first. Pyorrhea will recur in any mouth that is not kept clean. Your Dr. James. fingernails get dirty again, if you do not clean them often. Prophylaxis means the establishing of an immune condition. As long as the pocket remains we must use this treatment; the pocket must be eradicated. The only way to do this is to force the gums to a point where there is bone to support it. The pocket is eliminated by polishing, and by keeping all surfaces of the tooth well polished; the dentist takes the responsibility of keeping the surface polished. You have not established a prophylactic condition until the pocket is eliminated. To keep a tooth clean, be sure that all the surface is absolutely clean. One of the best ways is to use a good toothbrush, rubbing with ivory soap. Tell the patient that you will get them cleaner than they ever have been able to do. There are cases where I find it necessary to split the gum or cut away a portion of the gum, where it would take a longer time than usual to obliterate it. These rules are the reverse of what we did before. But we get results from the massaging of the gums and polishing of the teeth. The patient cannot do this massaging himself. The idea is that the massaging will remove the irritation.

In regard to the systemic connection, what I claim is that you have no kind of deposit until you first have local irritation. Local irritation does not always come from tartar. I will show in the clinic to-morrow that there are a great many unclean teeth that have no stain on them that you can see with the naked eye, and which have deposits that it is impossible to remove with the brush alone. That there are corners here and there that are not kept clean, and there will be much substance that has not been dissolved. Decomposition has not set in far enough to show any discoloration. Breaking down of the enamel sometimes occurs first thing.

Sensitiveness of the teeth can be overcome. I had a case of a lady who had been having a very severe time with her teeth, and she had been from one dentist to another, and had been to New York to have her teeth treated, and when she came to me she said she hated a dentist and everything connected with a dentist. Her teeth were so sensitive, I could not

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blame her. I used the wooden point for polishing, and by following this up I quickly cured the teeth of their sensitiveness. After ten days' time she was free of the condition. I began without her realizing what I was doing, and went on with the treatment until I got through. She was very skeptical in the beginning, and I had to be very careful. She said it was the first time in her life that she had no trouble with her teeth, and no sensitive feeling in her mouth.

Carr's set of instruments is merely a systematized method of doing work. You can do intelligent work with them. When you use a set it does not mean that you are to use 150 instruments on every case. You start out with the right instrument for the surface of the tooth, but it would be impossible to find a pocket with the one you start out with; you need one to get around the roots. And so you use the one that is best suited for that particular surface.

In regard to the systemic connection, take a person suffering from autointoxication, or uric acid in the blood; there is no doubt that it would require less local irritation to inaugurate pyorrhea in the mouth. But we will never have the deposit if we keep down all local irritation. I have treated a diabetic patient; the first and second molars, and two bicuspids on the right side were affected; the bone had broken down about the roots, yet the pyorrhea was cleared up in that mouth; there is absolutely no sign of it left. I think I have answered all questions.

Discussion of Paper by Dr. A. E. Barker.

I feel it a rather difficult matter to discuss this

Dr. A. C. Watson,
Denver, Colo.

I feel it a rather difficult matter to discuss this
paper, as Dr. Barker leaves a good many loopholes to
get out of. He seems to condemn porcelain and gold
inlays. Of course, it is along the line of experiment-

ing with new things, but it is in this way that we make our advancement. Everything new cannot be called a fad. We should not be content to travel in the beaten paths of proven methods. If we did that we would still be putting on porcelain crowns with wooden pins. We were obliged to do some experimenting or we would be still using the old wooden pin. The porcelain crown, or a sightly porcelain inlay in an incisor, which will stand the test of years, is worthy of trial. I do not look upon that as a fad. I think his percentage of porcelain and gold inlay failures is too high. Perhaps he has in mind our friend from Chicago who recommended porcelain inlays in every possible cavity in any tooth. That was going to an extreme, but the careful dentist will discriminate whether or not he can use porcelain better than any other material. I cannot look



upon the gold inlay as a fad. I commenced to think I had put in a good many years learning how to put in a good gold filling, and now it seems that this new way may be learned very quickly. While I am very grateful to Dr. Barker for the many good points he made in his paper, and which we all appreciate, yet I am in favor of taking advantage of these latter day methods. The only mystery to me is that it took the profession such a long time to reach these points, and how long it took Dr. Taggart, from the time he commenced to practice, to discover the gold inlay method. It is such a help to the people. I am not one of those who have discarded gold foil entirely. We must use it when we can not get good results with the gold inlay.

When we have a new method we must make the departure very carefully from the old and beaten paths, but it is very often a grand, good thing to turn far from old proven methods, especially when we find something much better. There is always room for improvement.

Dr. Steele. paper. I enjoyed to the full the points he brought out, and I enjoyed the discussion which has been opened by Dr. Watson. I am glad he is one of the enthusiastic converts to the inlay cause. I rather expected he would leave that part to me. I expected him to make a plea for the foil filling. I like the tone of the paper. The essayist speaks of a great many things we all know to be true. In our endeavor to progress we do try a great many fads. Some there are which remain only fads. Some worthy of further experiment and adoption are still among the so-called fads. Some of the ideas develop into something good. No doubt many of our present customs were once ridiculed as fads.

The great point, I take it, in Dr. Barker's paper is to teach us caution, to be very careful in departing from old tried methods. Orthodontia at one time was ridiculed, and there is possibility even now of running to extremes there; yet its usefulness is unquestioned. In oral prophylactic treatment we are prone to run to extremes, but fighting the germs is not a hobby. In religions we meet many fads; some have a passing moment of recognition, others are forgotten, and still others have quite a following. It strikes hard those who have been raised in the old orthodox teachings, and they cannot see where the possible good can come of advancing in religion. They are amazed and horrified at the people; they will recognize no new message. An old Scotchman said there would be no new churches established in heaven. When asked how that was known to him, he replied that if anybody tried it the whole Scotch kirk would rise up in a body.

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Inlays.

We have tried the inlay long enough to know that it is no longer a fad. To me it has outgrown the experimental stage, and is now well established.

In the matter of dental experiments, when you recommend a young dentist who can make a perfect amalgam filling, he should be informed that he should not confine his efforts to one branch, but that he can with proper teaching, make equally as good inlays. One is not more difficult than the other. No one should commence to make inlays for his patients until he has mastered the technique on models. I do not believe dentists spend much time experimenting on models, but I think it quite necessary that they should do so. Those who try a thing out first seldom fail to give good service in their practice. Some of the work seen is not inlay work; I call it rather an outlay, more like a plaster. A carpenter would call an inlay something set into the wood, not set on, like a plaster. I do not class this sort of work as inlay work; it is only put on the outside, there is no definite seat to hold it in place. There should be a definite seat. It should be possible to seat any inlay definitely and accurately, and you want to feel that it is in place. It will not fall out, if properly set. I think the inlay has come to stay.

We will have to try out the fads with caution, and get the best out of them for the benefit of the people. No doubt all our methods can be improved. Take the gold filling; the foil filling is a barbarous method of treating a human being. Anything that will make our operations more humane and serviceable ought to be investigated carefully. I do not believe inlay work is a fad at all. The gold inlay will have quite a field of usefulness until something better turns up. Where it is indicated it is simply indispensable.

Use of Germicides. There are some other matters of interest in the paper. Take the subject of medicine. That was a pretty broad statement, and I simply do not accept that statement about iodine. I saw a surgeon oper-

ating the other day, and he lays his success to the use of iodine solution to wash out the wounds before closing them. He uses it in operations of setting bones, where there is danger of infection. I do not accept that statement that the mouth, after being washed, is more susceptible to germ growth and in a worse condition than before it was used. I would like to quote from Dr. Miller. He makes the statement that germicidal washes do put a stop to bacteria in the mouth. A culture taken after the antiseptic wash will not form colonies. I think that Dr. Barker is looking more to the fact that washes are becoming too numerous on the market, and people are using them indiscriminately. I have great faith in washes and use them freely.



Dr. Wm. Smedley. against any of the experiments that have been called fads. I think that any method that has been used enough to be called a fad has considerable merit. I think the case is really against the man who becomes a faddist, not against the fad. Any man who becomes so enamored of a certain method or procedure, whether a filling material or a certain style of crown, or a certain style of bridge work, that he becomes a faddist or enthusiast on that particular thing to the exclusion of any other method, is the one to be criticized. If he sticks to only one certain style of bridge, he lessens his usefulness to his patients, because his method is biased, and he sees only the application of his pet method to the exclusion of everything else. The patient would be much better served by a thorough general practitioner, instead of a faddist or specialist. That is the one point I would like to make.

Speaking of fads, I associate with the thought of a fad the thought that some person has something that he would call a model idea. That is, a man with a fad has something he thinks is a model idea in the way of some new manipulation. That reminds me of a little story I heard about a man that said he had a model wife, and he was always boasting of his model wife. His friend said to him, "John, do you know what model means; did you ever look it up?" He said he had not. Then he got the dictionary and found that it meant "a small imitation of the real thing."

Dr. Fickman. by the remarks that inlay work could be done as well as amalgam filling. I feel that if I attempted to put in either amalgam or inlay, I could do one as well as the other. We do not need to stick to the old ideas; if we did we would not be riding in automobiles, trains, or even carriages. To make advancement, new ideas must be encouraged.

I have nothing further to say on this subject.

Dr. Barker. The thought that came to me was simply to prevent the pendulum from swinging too far one way. There has been nothing said in the discussion about the one point that I made, that it is the tendency of the dentists to use some of the newer ideas for the purpose of increasing their fees. There is a tendency to discard some of the older methods for the new with the idea that they are not of much more value to the patient, but that they will bring an increased fee. That is the point we ought to be careful about. You know new things always bring a better price. If we put in an inlay that is satisfactory, that is well, but some that I have seen the operator himself was not satisfied with. Yet it brought an increased fee, and the patient paid.

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With the month of May the crucial stage in the affairs of our National Dental Association will have arrived. It may not have occurred to many, but it is a fact that at present we are determining by the ballot of States what the future of our National Association shall be. By the interest and ballots of the State Societies it will be decided whether we are to remain as we are and stagnate, or whether we shall progress by organization into a powerful homogeneous co-operative association of American dentists.

At the Cleveland meeting the National Dental Association adopted the following resolution:

"Resolved, That in accordance with the expressed wish of the State Society Delegates to the meeting which considered the alteration of the constitution, the National Dental Association will reorganize along the lines of the American Medical Association;

"Resolved, That a draft of the Constitution, drawn in conformity with the above, be printed and forwarded to the State Societies, with the request that such as may desire shall make application for Constituent



Membership at the next meeting, stating how many members they can guarantee;

"Resolved, That if properly supported by the State Societies, the Constitution and By-Laws be finally revised and adopted at the next meeting, the same to take effect at the meeting of 1913."

In conformity with this resolution, the Committee on Revision of the Constitution presented a draft of a Constitution, which has been sent to all of the State Dental Societies. In this Constitution is a clause which reads: "Each Constituent Society shall maintain a membership in this Association equal to not less than two-thirds of its own membership."

This has caused some confusion, and has engendered some hesitation at the State Society meetings already held. The true status, therefore, may be explained with advantage.

In attempting to reorganize the National, which at present has 800 members who pay five dollars annually, and at the same time reduce the dues to two dollars, while including subscription to the projected Journal of the National Association, the Revision Committee were obliged to formulate some plan which would determine whether or not reorganization would be successful from a financial standpoint. Hence the stipulation that each society should maintain a membership in the National equal to two-thirds of its own membership. And it is very desirable that every State Society that can make such guarantee should do so, because such action would materially aid in assuring the success of the new organization. But if any State Society should find it impossible to make such promise, it should, nevertheless, pass a resolution applying for Constituent Society membership. After taking this action, the Secretary should be directed to communicate immediately with all members, soliciting individual applications for membership in the National. The National does not meet until September, therefore there is sufficient time for this work by the State Secretaries, who should be prepared to report at the meeting in Washington exactly how many members each State Society can bring into the reorganized National.

Attention is specifically called to the resolution passed by the National. The State Societies are requested to apply for Constituent Membership, "stating how many members they can guarantee." The resolution does not require a guarantee of two-thirds of the State Society mem-

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bership. This guarantee is provided for in Section 1, Article 4, of the proposed new constitution. But this constitution has not yet been finally adopted, and therefore is open to alteration. It may be amended in various ways. For example, if a sufficient number of States express the desire to affiliate with the National, and guarantee a membership large enough to assure the financial success of the association with dues as low as two dollars, then the stipulation that each State Society must maintain a membership in the National equal to two-thirds of its own membership may be eliminated altogether. Or such guarantee may be required in order that a State Society may elect representatives in the House of Delegates. Or there is yet another alternative. As the Constitution at present stands, the House of Delegates is limited to fifty. The basis of apportionment of these delegates remains to be determined, and cannot be decided until it is known how many States will become Constituent Societies. But just as a basis of argument, suppose that the rule should read that each State shall be allotted the right to elect one delegate for each one hundred members which it shall maintain in the National. Then a State might become a Constituent Society and its members might become eligible to all individual privileges of membership, while the State Society would have no representative in the House of Delegates until it could maintain its proportional quota.

These are problems that are yet to be solved, and the greatest hope for the final success of reorganization lies in the fact that it is progressing slowly and with due consideration of the quite different conditions existing in the several States.

The present duty of the State Societies which are to meet during the next four months may be summarized thus briefly: First, pass a resolution applying for Constituent membership in the National; second, guarantee two-thirds of the Society's membership, or more. If this be impossible, have the Secretary solicit memberships and report the total to the Secretary of the National. With such definite facts presented, the Council of the National will be in the position to determine definitely the best advice to offer to the main body on the great question of reorganization.

Progress Thus Far. Such progress has already been made towards reorganization that success seems to be assured. The following State Societies have already met and



have voted to become Constituent Societies in the reorganized National Association: Arizona, Connecticut, District of Columbia, Maryland, Michigan, Ohio and Rhode Island.

Connecticut and Ohio, jointly, have at present 81 members in the National, and have voted to guarantee two-thirds of their membership to the reorganized National. This would mean that they would bring in over seven hundred. Michigan has 800 members, and the other societies named a total of 469, a gross total of over 1,200. How many of these will come into the National will be reported at the Washington meeting. At present they have but 45 members in the National; thus only 125 out of their total membership would be required to pay the same total of dues. According to best information received, Arizona, District of Columbia, Maryland and Rhode Island voted to come in with their entire membership, 469. At the Michigan meeting one member stated that he would personally guarantee one hundred members from that State, rather than have his State unrepresented. It is such spirit as this that is needed to assure us success.

Prior to the Cleveland meeting, six State Societies, having 1,380 members, voted to unite with the National if reorganized. Of these, Maine, Vermont and Massachusetts promised to bring in their entire membership. At present these six societies have but 71 members in the National These statistics attest the popularity of the movement.

May and June Meetings.

The May and June State Society meetings will have a tremendous bearing upon the final determination of this question. During May, meetings will be held in Alabama, California, Illinois, Indiana, Ken-

tucky, Massachusetts, Nebraska, New York, South Dakota, Texas, and Vermont. In June, meetings will be held in Georgia, Idaho, Maine, Minnesota, Mississippi, Montana, South Carolina, Tennessee, Utah, and Washington. All members in these States having the interest of our beloved profession at heart should attend their State meetings and work and vote for affiliation with the new National Dental Association.



SOCIETY ANNOUNCEMENTS

National Society Meetings.

NATIONAL DENTAL ASSOCIATION, Washington, D. C., September 10, 11, 12, 13, 1912. Secretary, Dr. Homer C. Brown, 185 E. State St., Columbus, O.

CANADIAN DENTAL SOCIETY AND ONTARIO DENTAL ASSOCIATION, union meeting, Hamilton, Ont., June 3, 4, 5, 6, 1912. Secretary, J. A.

Cameron Hoggan, Federal Bldg., Hamilton, Canada.

AMERICAN SOCIETY OF ORTHODONTISTS, Chicago, Ill., July 1, 2 and 3, 1912. Secretary, Dr. F. C. Kemple, 576 Fifth Ave., New York.

State Society Meetings.

Alabama Dental Association, Tuscaloosa, Ala., June 11, 12, 13, 14, 1912.

Secretary, G. F. Petrey, Florala, Ala.

ARKANSAS STATE DENTAL ASSOCIATION, Little Rock, Ark.

Secretary, Dr. I. M. Sternberg, Fort Smith, Ark.

ARIZONA DENTAL SOCIETY.

Secretary, Dr. H. H. Wilson, Phoenix, Ariz.

California State Dental Association, San Francisco, Cal., May 13, 14, 15, 1912.

Secretary, Dr. E. E. Evans, Union Savings Bank Bldg., Oakland, Cal. Colorado State Dental Association, Colorado Springs, June 20, 21, 22, 1912.

Secretary, Chas. A. Monroe, Boulder, Col.

GEORGIA STATE DENTAL SOCIETY, Americus, Ga., June 11, 12, 13, 1912. Secretary, Dr. DeLos H. Hill, Prudential Bldg., Atlanta, Ga.

Idaho State Dental Society, Idaho Falls, Ia., June, 1912.

Secretary, H. F. Kimball, Salmon, Ia.

ILLINOIS STATE DENTAL SOCIETY, Springfield, Ill., May 14-17, 1912. Secretary, Dr. J. F. Waltz, Decatur, Ill.



INDIANA STATE DENTAL ASSOCIATION, Indianapolis, Ind., May 21, 22, 23, 1912.

Secretary, Dr. Otto U. King, Huntington, Ind.

KENTUCKY STATE DENTAL ASSOCIATION, Louisville, Ky., May 27, 28, 29, 1912.

Secretary, W. M. Randall, Louisville, Ky.

MAINE DENTAL SOCIETY, Bar Harbor, Me., June 26, 27, 28, 1912. Secretary, I. E. Pendleton, Lewiston, Me.

Massachusetts Dental Society, Boston, Mass., May 2, 3, 4, 1912. Secretary, Chas. W. Rodgers, Dorchester, Mass.

MINNESOTA STATE DENTAL ASSOCIATION, St. Paul, Minn., June 14, 15, 1912.

Secretary, Benjamin Sandy, New Syndicate Bldg., Minneapolis, Minn.

MISSISSIPPI STATE DENTAL SOCIETY, Gulfport, Miss., June 4, 5, 6, 1912. Secretary, L. B. Price, Corinth, Miss.

Montana State Dental Society, Missoula, Mont., June 14, 15, 1912. Secretary, Dr. T. Rider, Missoula, Mont.

Nebraska State Dental Society, Lincoln, Neb., May 21, 22, 23, 1912. Secretary, Dr. J. H. Wallace, Omaha, Neb.

New Hampshire Dental Society, Weirs, N. H., June 19, 20, 21, 1912. Secretary, F. F. Fisher, Manchester, N. H.

NEW YORK STATE DENTAL SOCIETY, Albany, N. Y., May 9, 10, 11, 1912. Secretary, Dr. A. P. Burkhart, 52 Genesee St., Auburn, N. Y.

NORTH CAROLINA DENTAL SOCIETY, Raleigh, N. C., July 3, 4, 5, 6, 1912. Secretary, J. W. Stanly, Wilmington, N. C.

NORTH DAKOTA DENTAL ASSOCIATION, Grand Forks, N. D., May 14, 15, 1912.

Secretary, Dr. E. N. Hegg, Hatton, N. D.

PENNSYLVANIA STATE DENTAL SOCIETY, Pittsburg, Pa., June 11, 12, 13, 1912.

Secretary, Dr. Luther M. Weaver, 7103 Woodland Ave., Philadelphia, Pa.

South Carolina State Dental Association, Isle of Pines, Charleston, S. C., June 18, 19, 20, 1912.

Secretary, Dr. W. B. Simmons, Piedmont, S. C.

SOUTH DAKOTA DENTAL SOCIETY, Sioux Falls, May 14, 15, 1912. Secretary, J. D. Donahoe, Sioux Falls, S. Dak.

TENNESSEE STATE DENTAL ASSOCIATION, Memphis, Tenn., June 6, 7, 8, 1912.

Secretary, Dr. J. L. Manire, Memphis, Tenn.



Texas State Dental Association, Abilene, Texas, May 2, 3, 4, 1912. Secretary, Dr. J. G. Fife, Dallas, Texas.

UTAH STATE DENTAL SOCIETY, Ogden, Utah, June, 1912.

Secretary, Dr. W. G. Dalrymple, 2421 Washington Ave., Ogden, Utah.

VERMONT STATE DENTAL SOCIETY, Burlington, Vt., May 15, 16, 17, 1912. Secretary, Dr. H. F. Hamilton, Newport, Vt.

VIRGINIA STATE DENTAL ASSOCIATION, Old Point Comfort, Va., July 9, 10, 11, 1912.

Secretary, Dr. W. H. Pearson, Hampton, Va.

Washington State Dental Society, Spokane, Wash., June, 1912. Secretary, Dr. F. B. Lynott, 249 Peyton Blk., Spokane, Wash.

WEST VIRGINIA STATE DENTAL SOCIETY, Webster Springs, Va., Aug. 14, 1912.

Secretary, Dr. Frank L. Wright, Wheeling, W. Va.

Wisconsin State Dental Society, Oshkosh, Wis., July 9, 10, 11, 1912. Secretary, Dr. O. G. Krause, Wells Bldg., Milwaukee, Wis.

Hlabama Dental Association.

The forty-third annual meeting of the Alabama Dental Association will be held in Tuscaloosa, Ala., June 11, 12, 13 and 14, 1912.

Exceptionally good papers are being prepared, and the Clinic Committee promises something extra.

All ethical dentists are cordially invited to attend this meeting.

G. F. Petrey, D.D.S., Secretary.

Florala, Ala.

New Hampshire Dental Society.

The annual meeting of the New Hampshire Dental Society will be held at Hotel Weirs, Weirs, N. H., June 19, 20, 21. All members of the profession are cordially invited to be present.

FRED F. FISHER, Secretary.

Manchester, N. H.

Pennsylvania State Dental Society.

The forty-fourth annual meeting of the Pennsylvania State Dental Society will be held in Carnegie Music Hall, Pittsburgh, June 11, 12 and 13, 1912.

LUTHER M. WEAVER, Recording Secretary.

7103 Woodlawn Ave., Philadelphia, Pa.



The Clinic of the National Dental Association.

The Clinic Committee desires to extend to all members in good standing of all dental societies a cordial invitation to attend and to clinic at the "all-day" clinic of this Association, to be held at The New Willard Hotel, Washington, D. C., Friday, September 13th. The enormous ball room, top floor of this hotel, has been secured, and the management promises us every convenience.

We wish particularly to call your attention to the classification of the different clinical material, where every effort will be made to arrange the different events according to title and in sequence so that the various "steps" in the operation may be seen at a glance, without the usual regard to chair or table. This will avoid confusion and save time, allowing the members to select and study favorite subjects without hunting all over the room.

From the material now in hand your committee can promise a large and varied clinic, that we may assemble all clinicians' names and titles for the preliminary program. Kindly reply at once to

CLARENCE J. GRIEVES,

Chairman Clinic Committee,
Park Ave. and Madison St., Baltimore, Md.

Committee.

A. O. Ross, Vice-Chairman, 807 N. High St., Columbus, Ohio.

S. W. Bowles, Secretary, 1616 I St., Washington, D. C.

W. R. Black, Mason City, Iowa.

A. P. Burkhardt, Auburn, N. Y.

J. T. McClenahan, Washington, D. C.

W. D. Tracy, New York City.

George T. Savage, Worcester, Mass.

John H. McClure, Wheeling, W. Va.

J. E. Chace, Ocala, Fla.

E. L. Pettibone, Cleveland, Ohio.

H. J. Allen, Washington, D. C.

W. R. Wright, Jackson, Miss.

C. A. Lundy, Los Angeles, Cal.

S. H. McAfee, New Orleans, La.

C. M. Barnwell, Atlanta, Ga.

Richard L. Simpson, Richmond, Va.

W. H. Scherer, Houston, Texas.



Cennessee State Dental Association.

The forty-fifth annual meeting of the Tennessee State Dental Association will be held at Memphis, Tenn., in the Business Men's Clubrooms, June 6, 7 and 8, 1912.

The Business Men's Club extend the courtesies of the club to all the visiting dentists, and the Association invite all ethical dentists to attend.

J. L. Manire, Secretary.

Memphis, Tenn.

Georgia State Dental Society

The forty-fourth annual meeting of the Georgia State Dental Society will be held at Americus, Ga., June 11, 12, 13, 1912.

Instructive papers have been secured, and the Clinic Committee will unquestionably present a fine list of clinics.

A cordial invitation is extended to all ethical dentists.

M. M. Forbes, Secretary.

810-811 Candler Bldg., Atlanta, Ga.

Colorado State Dental Association.

The 26th annual meeting of the Colorado State Dental Association will be held at Colorado Springs, June 20, 21 and 22, 1912. Dr. A. W. Starbuck, Colorado College of Dental Surgery, Denver, Colo., will have complete charge of clinics. He will gladly furnish any information relative to the same. Exhibitors desiring space, please address the secretary.

All ethical practitioners are cordially invited to attend this meeting. Any information desired will be cheerfully furnished by the secretary.

> H. F. HOFFMAN, President, 324 Metropolitan Bldg., Denver, Colo. CHAS. A. MONROE, Secretary, Boulder, Colo.

South Carolina State Dental Association.

The forty-second annual meeting of the South Carolina State Dental Association will be held at Isle of Palms, Charleston, S. C., June 18, 19, 20, 1912.

Dr. R. Atmar Smith, Charleston, S. C., is Chairman of the Arrangement Committee. Programs will be mailed out June 10th. All ethical dentists are cordially invited.

W. Busey Simmons, Recording-Secretary.

Piedmont, S. C.



Southern Wisconsin Dental Association.

The eighteenth annual meeting of the Southern Wisconsin Dental Association will be held at Highland Park, Delavan, Wisconsin, June 6 and 7, 1912.

C. W. Collver, Secretary.

Clinton, Wis.

Illinois State Roard of Dental Examiners.

The semi-annual meeting of the Illinois State Board of Dental Examiners for the examination of applicants for a license to practice dentistry in the State of Illinois, will be held at the Northwestern University Dental School, corner Lake and Dearborn Streets, Chicago, beginning Thursday, June 13, 1912, at 9 A. M.

The following preliminary qualifications shall be required of candidates to entitle them to examination by this Board for a license to practice dentistry in the State of Illinois: "Graduates of a reputable dental or medical school or college, or dental department of a reputable university, who enter the school or college as freshmen, on or after the school year 1906-7, must have a minimum preliminary education of not less than graduation from an accredited high school or a certificate from the State Superintendent of Public Instruction, equivalent officer or deputy, acting within his proper or legal jurisdiction, showing that the applicant had an education equal to that obtained in an accredited high school, which certificate shall be accepted in lieu of a high school diploma." Candidates will be furnished with proper blanks and such other information as is necessary, on application to the secretary. All applications, together with the fees, twenty-six dollars (\$26), must be filed with the secretary at least five (5) days prior to date of examination. The examination fee is twenty dollars (\$20), license fee five dollars (\$5), registration fee one dollar (\$1).

Address all communications to

T. A. Broadbent, Secretary.

705 Venetian Building.

Idaho State Board of Dental Examiners.

The next meeting, for examination of the Idaho State Dental Board, will be held in Boise, Idaho, beginning July 1, 1912, at 9 A. M., at the Capitol Building.

ALBERT A. JESSUP, Secretary.

Overland Bldg., Boise, Idaho.

May



Southern Atlantic and Mercer Dental Societies.

Notwithstanding the fact that Young's Old Pier, Atlantic City, on March 29th, was damaged to an extent entailing \$200,000 loss, the Southern, Atlantic and Mercer Dental Societies, of New Jersey, will hold their Second Annual Convention and Exhibit in Atlantic City, as arranged, June 19th, 20th and 21st. It was announced in March that both the convention and exhibit would be held at the Old Pier, but it having just been ascertained that contemplated repairs cannot be made by June 19th, the S. A. M. Executive Committee have contracted for the use of the famous Steel Pier, located at Virginia Avenue and the Boardwalk, hence all notices, arrangements and contracts relating to the convention and exhibit are being made to conform to the new location.

Dr. H. E. Friesell, of Pittsburg, Pa., Professor of Operative Dentistry, University of Western Pennsylvania, will read a paper on the subject of "Extention for Prevention"; Dr. C. S. Van Horn, of Bloomsburg, Pa., will read a paper upon the subject, "The Wax Pattern—a technique, together with appliance, etc., for its use." Two other papers which are being arranged for will be announced later.

WALTER W. CRATE, Chairman Press Com.

Camden, N. J.

Montana State Board of Dental Examiners.

The Montana State Board of Dental Examiners will meet in Helena, July 8th, 9th, 10th and 11th, for the regular annual session. All desiring to take the examination will please send in their application to the secretary, thirty days prior to July 8th.

G. A. CHEVIGNY, Secretary.

106-7-8 Clark Blk., Butte, Mont.

South Dakota State Board of Dental Examiners.

The South Dakota State Board of Dental Examiners will hold its next meeting at Sioux Falls, S. Dak., July 9, 1912, at 1.30 P. M., continuing three days. All applications for examination, together with a fee of twenty-five dollars, must be in the hands of the secretary by July 1st. Applicants who have not complied with the above will not be permitted to take the examination.

For further information, blanks, etc., address

ARIS L. REVELL, Secretary.

Lead, S. Dak.



Alumni Association of Chicago College of Dental Surgery.

The annual meeting and clinic of the Alumni Association of the Chicago College of Dental Surgery will be held in the college building on Monday and Tuesday, June 3 and 4, 1912. This meeting is to be a homecoming for all the graduates of the college as well as for all ethical practitioners. Mark off the dates now and plan to come.

H. C. Peisch.

1775 Wilson Ave., Chicago, Ill.

Alabama Board of Dental Examiners.

The Alabama Board of Dental Examiners meets in Tuscaloosa, Ala., Monday, June 10, 1912, 9 o'clock A. M.

Requirements

Applicants are required to hold diploma from a reputable dental college.

Theoretical written examination on the branches taught in reputable dental colleges is required, and practical work, viz.: I approximal gold filling, I approximal amalgam filling, and an anterior bridge of six teeth using cuspids as abutments, Richmond crowns, soldering to be done in the presence of one or more members of the Board. No temporary license granted. Examination fee, \$10.

For further information send stamp and address to

W. E. PROCTOR, Secretary.

Sheffield, Ala.

Nebraska State Dental Society.

The thirty-sixth annual meeting of the Nebraska State Dental Society will be held in Lincoln, May 21, 22, 23, 1912. Lindell Hotel as head-quarters and the clinics in the Auditorium.

We are looking forward to the best meeting in our history.

The following men from out of the State will appear on the program:

Dr. C. M. McCauley, Abilene, Texas, a paper and clinic on Amalgam.

Dr. C. G. Myers, Cleveland, Ohio, High Pressure Anæsthesia.

Dr. Chas. Woodbury, Council Bluffs, Iowa, paper on Indications for Gold Inlay and for the Foil Filling."

Dr. Horace Warren, Missouri Valley, Iowa, will conduct a campaign for the public on Oral Hygiene.

All ethical practitioners are invited to attend the meeting.

J. H. Wallace, Brown Block, Omaha, Sec'y.

C. C. FARRELL, Cozad, Nebr., Pres.



Pennsylvania State Board of Dental Examiners.

The next examination of the Pennsylvania State Board of Dental Examiners will be held in Philadelphia and Pittsburgh on Wednesday, Thursday, Friday and Saturday, June 19, 20, 21 and 22, 1912, the practical work being held on the first day. Application blanks can be secured from the Department of Public Instruction, Harrisburg.

ALEXANDER H. REYNOLDS, Secretary.

4630 Chester Avenue, Philadelphia.

Indiana State Board of Dental Examiners.

The Indiana State Board of Dental Examiners will hold its next regular meeting at the State House in Indianapolis, June 10th to 15th. All applicants for examination and registration in the State will be examined at this time. No other examination will be held until January, 1913. No temporary permits are issued.

For further information and instructions apply to

F. R. Henshaw, Secretary.

508 K. of P. Bldg., Indianapolis.

Iowa State Board of Dental Examiners.

The next meeting of the Iowa State Board of Dental Examiners, for the examination of applicants for licenses, will be held at Iowa City commencing Monday, June 3, 1912.

J. A. West, Secretary.

417 Utica Bldg., Des Moines, Ia.

Virginia State Board of Dental Examiners.

The regular annual meeting of the Virginia State Board of Dental Examiners for the examination of applicants will be held in Richmond, Virginia, June 11, 1912, beginning at 9 A. M.

For further particulars address

Dr. J. P. Stiff, Secretary.

Fredericksburg, Va.